

**RESPONSES TO
U.S. DEPARTMENT OF ENERGY
LETTERS TO STATE AGENCIES
AND NATIVE AMERICAN GROUPS**

**United States Department of the Interior**

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127

September 23, 2002

**OFFICIAL FILE COPY
AMESQ**

James L. Elmore, Ph.D.
Department of Energy
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, TN 37831

Log No. _____
Date Received OCT 9 2002
File Code _____

Dear Dr. Elmore:

This responds to your letter of July 12, 2002 regarding Federally listed endangered or threatened species that may occur in the vicinity of the Portsmouth Gaseous Diffusion Plant (PORTS) located in Pike County, Ohio.

ENDANGERED SPECIES COMMENTS:

The proposed project lies within the range of the Indiana bat (*Myotis sodalis*), a Federally listed endangered species. Summer habitat requirements for the Indiana bat are not well defined, but the following are thought to be of importance:

1. Dead trees and snags (especially those with exfoliating bark), split tree trunk and/or branches, or cavities which may be used as maternity roosts;
2. Live trees (such as shagbark hickory) which have exfoliating bark;
3. Stream corridors, riparian areas, and upland woodlots which provide forage sites.

We recommend that if potential bat roost trees with the above characteristics are encountered in the project area, they should be saved wherever possible. If they must be cut, they should not be cut between April 15 and September 15.

If desirable trees are present and if the above time restriction is unacceptable, mist net or other surveys should be conducted to determine if bats are present. Any survey should be designed and conducted in coordination with the endangered species coordinator for this office, Ms. Angela Boyer (614-469-6923 ext. 22). The survey should be conducted in June or July, the period when peak bat populations could be expected.

The project lies within the range of the timber rattlesnake, a large shy rattlesnake that is declining throughout its national range. No Federal listing status has been assigned to this species. Instead, the U.S. Fish and Wildlife Service has initiated a pre-listing Conservation Action Plan to support state and local conservation efforts. Your proactive

efforts to conserve this species now may help avoid the need to list the species under the Endangered Species Act in the future. The timber rattlesnake is protected throughout much of its range and listed as endangered by the State of Ohio. Due to their rarity and reclusive nature, we encourage early project coordination to avoid potential impacts to timber rattlesnakes and their habitat.

In Ohio, the timber rattlesnake is restricted to the un-glaciated Allegheny Plateau and utilizes the specific habitat types, depending upon season. Winters are spent in dens usually associated with high, dry ridges. These dens may face any direction, but southeast to southwest are most common. Such dens usually consist of narrow crevices in the bedrock. Rocks may or may not be present on the surface. From these dens, timber rattlesnakes radiate throughout the surrounding hills and move distances as great as 4.5 miles. In the fall, timber rattlesnakes return to the same den. Intensive efforts to transplant timber rattlesnakes have not been successful. Thus protection of the winter dens is critical to the survival of this species. Some project management ideas include the following:

- 1) At a minimum, project evaluations should contain delineations of timber rattlesnake habitat within project boundaries. Descriptions should indicate the quality and quantity of timber rattlesnake habitat (den sites, basking sites, and foraging area, etc.) that may be affected by the project.
- 2) In cases where timber rattlesnakes are known to occur or where potential habitat is rated moderate to high, timber rattlesnake surveys may be necessary. If surveys are to be conducted, it may be helpful to inquire about timber rattlesnake sightings with local resource agency personnel or reliable local residents. In addition, local herpetologists may have knowledge of historical populations as well as precise knowledge of the habits, and the specific local types of habitats that may contain timber rattlesnakes. Surveys should be performed during the periods of spring emergence from dens (usually a short period in April or May) and throughout the active season until October. The species is often easiest to locate during the summer months when pregnant females seek open areas in early morning, especially after cool evenings.
- 3) In portions of projects where timber rattlesnakes will be affected, clearing and construction activities should occur at distances greater than 100 feet from known dens. Most importantly, tops of ridges and areas of exposed rock should be avoided.
- 4) In areas where timber rattlesnake dens are known or likely to exist, maintenance activities (mowing, cutting, burning, etc.) should be conducted from November 1 to March 1, when timber rattlesnakes are hibernating.

Two divisions of the Ohio Department of Natural Resources, the Division of Wildlife (614-265-6300) and the Division of Natural Areas and Preserves (614-265-6472), maintain lists of plants and animals of concern to the State of Ohio. If you have not already done so, you may wish to contact each of these agencies to obtain site-specific information about species of state concern.

If you have questions or we may be of further assistance in this matter please contact Mr. Bill Kurey of this office at 614-469-6923 ext. 14.

Sincerely,



Mary Knapp, Ph.D.
Supervisor

cc: R. Sanders, ODOW

FISH & WILDLIFE COMMISSION

Mike Boatwright, Paducah
 Tom Baker, Bowling Green
 Allen K. Gailor, Louisville
 Ron Southall, Elizabethtown
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COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF FISH AND WILDLIFE RESOURCES
 C. THOMAS BENNETT, COMMISSIONER

July 26, 2002

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AMESQLog No. 71283Date Received AUG 2 2002

File Code _____

RE: Environmental Impact Statement Converting DUF6
 Stored at Paducah Gaseous Diffusion Plant,
 McCracken County, Kentucky

Dear Mr. Elmore:

I have reviewed the information provided on the above-referenced project. Accordingly, I offer the following comments and recommendations.

A review of the Kentucky Fish and Wildlife Information System indicates that several federal and/or state threatened and/or endangered species are known to occur within McCracken County that could be impacted by the project. That species list is attached. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions. This information may also be obtained on the worldwide web at: www.kfwis.state.ky.us.

I would recommend that a habitat survey be conducted at the site of the proposed project and if any habitat that might harbor any of these species exists, then a specific survey for that species should be conducted. The results of those surveys will dictate if any additional surveys or analysis need to be conducted.

I appreciate the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne L. Davis".

Wayne L. Davis
 Environmental Section Chief

cc: Environmental Section Files



Arnold L. Mitchell Bldg. #1 Game Farm Road Frankfort, Ky 40601
 An Equal Opportunity Employer M/F/D

KY: Kentucky Fish and Wildlife Information Systems (KFWIS)

Page 1 of 2

1 of 1

<i>Alosa alabamae</i>	Alabama shad	Osteichthyes	MCCRACKEN	C	E	Reference
<i>Atractosteus spatula</i>	alligator gar	Osteichthyes	MCCRACKEN	E	E	Reference
<i>Cyprinella camura</i>	bluntnose shiner	Osteichthyes	MCCRACKEN	E	E	Reference
<i>Hybognathus hayi</i>	cypress minnow	Osteichthyes	MCCRACKEN	E	E	Reference
<i>Myotis sodalis</i>	Indiana bat	Mammalia	MCCRACKEN	LE	E	Reference
<i>Obovaria retusa</i>	ring pink	Bivalvia	MCCRACKEN	LE	E	Reference
<i>Notropis maculatus</i>	taillight shiner	Osteichthyes	MCCRACKEN	T	T	Reference
<i>Nyctanassa violacea</i>	yellow-crowned night-heron	Aves	MCCRACKEN	T	T	Reference



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

September 18, 2002

Mr. James L. Elmore, Ph.D.
U.S. Department of Energy
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, Tennessee 37831

Dear Dr. Elmore:

Thank you for your letter and enclosures received July 23, 2002, regarding the preparation of an Environmental Impact Statement (EIS) for the proposed construction and operation of a facility to convert DUF₆ to a more stable chemical form at the Paducah Gaseous Diffusion Plant (PGDP) in McCracken County, Kentucky. The referenced maps of the PGDP and proposed facility locations were not included in your letter. U.S. Fish and Wildlife Service personnel have reviewed the information submitted and offer the following comments for consideration.

According to our records, the following federally listed endangered species may occur on or near the PGDP:

Indiana bat *Myotis sodalis*

A qualified biologist should assess potential impacts and determine if the proposed project may affect the species. We recommend that you submit a copy of your assessment and the draft EIS to this office for review and concurrence. A finding of "may affect" could require the initiation of formal consultation procedures.

These constitute the comments of the U.S. Department of the Interior in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.). We appreciate the opportunity to comment. Should you have any questions or need further assistance, please contact Steve Alexander of my staff at 931/528-6481, ext. 210, or via e-mail at steven_alexander@fws.gov.

Sincerely,

The signature is handwritten in black ink, appearing to read "Lee A. Barclay". Below the signature, there is a small, stylized logo or mark that looks like a checkmark or a 'J' shape.

Lee A. Barclay, Ph.D.
Field Supervisor

xc: Wayne Davis, KDFWR, Frankfort
Laila Lienesch, FWS, Frankfort

DONALD S. DOTT, JR.
DIRECTOR



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY STATE NATURE PRESERVES COMMISSION

801 SCHENKEL LANE
FRANKFORT, KENTUCKY 40601-1403
(502) 573-2886 VOICE
(502) 573-2355 FAX

August 12, 2002

James L. Elmore, Ph.D.
Department of Energy
Oak Ridge Operations Office
P.O. Box 2001
Oak Ridge, TN 37831-2001

Dear Dr. Elmore:

This letter is in response to your data request of July 12, 2002 for State-Listed species information in the vicinity of the Paducah Gaseous Diffusion Plant DUF₆ Conversion facility project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur in the area. Based on our most current information, we have determined that 68 occurrences of the plants or animals and one occurrence of the exemplary natural communities that are monitored by KSNPC are reported as occurring in the specified area. Please see the attached report for more information. I have included a separate report of the species known from McCracken County, Kentucky as well.

Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission. The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

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Page 2
August 12, 2002

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,



Sara Hines
Data Manager

Enclosures: Data Report and Interpretation Key, McCracken County List
Endangered, Threatened, and Special Concern Plants and Animals of Kentucky
Plants and Animals Presumed Extinct or Extirpated from Kentucky
Monitored Natural Communities of Kentucky

Data Key for Element and Occurrence Reports (v. 3.98)Kentucky State Nature Preserves Commission
Natural Heritage Program Data Services

Many of the data fields on the enclosed report are easily understood. Other fields, however, use abbreviations and formats that are not always self-explanatory. A key to these fields follows. Your report may contain some or all of the following data fields.

BEARING:	Bearing in degrees from a center point to an occurrence's latitude and longitude. This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U, and Q precision occurrence records.
BESTSOURCE:	Best available reference to the occurrence: literature citation, collector, collection number, museum or herbarium code, etc.
COMMENTS:	Additional information about the occurrence including identification, taxonomy, or date of occurrence.
DIRECTIONS:	Directions to an occurrence. This field is masked for sensitive occurrences; contact KSNPC in these cases.
DISTANCE:	Distance from a center point to an occurrence's latitude and longitude. Units coded as M (miles), K (kilometers), and F (feet). This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U, and Q precision occurrence records.
ELCODE:	Element (species) code.
EOCODE:	Element (species) code, occurrence number (last three digits), and state.
EODATA:	Occurrence population data: date of observation, number of individuals, health, size of colony, flowering data, etc.
EORANK:	Judgement of occurrence quality: A = excellent, B = good, C = marginal, D = poor, E = verified extant but quality not judged, O = obscure (not found at reported site but more searching needed), H = historically known from site but no known observation or collection since 1975, X = extirpated from site.
FIRSTOBS:	Year of first known observation or collection.
GENDESC:	Description of an occurrence's habitat.
GRANK:	Estimate of element abundance on a global scale: G1 = extremely rare, G2 = rare, G3 = uncommon, G4 = common, G5 = very common, GH = historically known and expected to be rediscovered, GU = uncertain, GX = extinct. Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species.
HABITAT:	General description of the element's habitat across its range.
IDENT:	Whether the identification has been checked by a reliable individual and is believed to be correctly identified: Y = identification confirmed and believed correct, N = No, identification determined to be wrong despite reports to the contrary, ? = Whether identification is correct or not is confusing or disputed, blank or U = unknown whether identification correct or not, assumed correct.
KSNPC:	Kentucky State Nature Preserves Commission status: N or blank = none, E = endangered, T = threatened, S = special concern, H = historic, X = extirpated.
LASTOBS:	Year(-month-date) of most recent known observation or collection.
LAT:	Latitude. This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U and Q precision occurrences.
LONG:	Longitude. This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U and Q precision occurrences.
MAP NUMBER:	Number used to location the element on KSNPC Heritage maps.
MARGNUM:	See MAP NUMBER.
PREC:	See PRECISION.

ECODE	SNAME	SCCMNAME	STATE	LASTORS	PRCC	DENT	COUNTY	7.5 MINUTE QUADRANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
***Vascular Plants											
PDFB0GU410137KY	BAPTISIA BRACTEATA VAR LEUCOPHAEA	CREAM WILD INDIGO	KY	1997-05-11	♂	McCracken	HEATH	WEST KY WMA, RD AROUND NUCLEAR PLANT (DYKE) RD.			RAIRIES AND OPEN WOODS ON SANDY SOIL.
PDJUG10107002KY	CARYA AQUATICA	WATER HICKORY	KY	1997-	♀	McCacken	JOPPA	METROPOLIS LAKE.			
POST010307021KY	HALESA TETRAPTERA	MOUNTAIN SILVERBELL	KY	2001-04-3	♂	McCacken	JOPPA	METROPOLIS LAKE SWP SW END OF METROPOLIS LAKE, CA 0.3 AIR MILE E OF POWER PLANT LOCATED OFF KY 96.			RICH WOODS AND EDGES OF SLOUGHS AND OXBOW LAKES.
POST010307051KY	HALESA TETRAPTERA	MOUNTAIN SILVERBELL	KY	1991-06-20	♂	McCacken	JOPPA	CIRCA 1.0 AIR MILE NW OF N CORNER OF SETTLING PONDS FOR SHAWNEE STEAM PLANT ALONG RIDGE ABOVE OHIO RIVER.			RICH WOODS AND EDGES OF SLOUGHS AND OXBOW LAKES.
PDAST162407001KY	MELANTHERA NIVEA	SNOW MELANTHERA	KY	2001-07-23	♂/♀	McCacken	JOPPA	METROPOLIS LAKE, OFF KY 96, W OF PADUCAH.			FLOODPLAINS AND SANDY WOODS INCLUDING DISTURBED OPENINGS.
PMPOA448050105KY	MUhlenbergia glabriflora	HAIR GRASS	KY	1977-09-21	♀	McCacken	JOPPA	ALONG METROPOLIS FERRY ROAD, OFF KY 1420, 725 BETWEEN KY 726 AND KY 1154 (MARGNUM 34, 37055N, 88480W), (MARGNUM 35, 37053N, 88480W), (MARGNUM 36, 37052N, 88480W), (MARGNUM 37, 37051N, 88480W).			DRY, DESSICATED OR BAKED SOILS, PRAIRIES, GRAVELS, OR ROCKY SLOPES AND MEDLEY REPORTS WET WOODS, MARSH EDGES AND FIELDS.
PDASTBL082015KY	SULPHUR LACINIUM VAR ROBINSONI	COMPASS PLANT	KY	1993-07	♂	McCacken	HEATH	(MARGNUM 38, 37057N, 88481W), JCT OF MAGRUDER RD (MARGNUM 39, 37057N, 88481W), JCT OF MAGRUDER RD (MARGNUM 40, 37057N, 88481W), JCT OF MAGRUDER RD (MARGNUM 41, 37056N, 88481W).			PRAIRIES INCL. REMNANTS OF THIS FLORA ON ROADSIDES AND FIELDS.
PDASTBL0820125KY	SULPHUR LACINIUM VAR ROBINSONI	COMPASS PLANT	KY	1993-07	♂	McCacken	HEATH	WEST KENTUCKY WILDLIFE MANAGEMENT AREA BETWEEN SPRING BAYOU (BA YO CREEK) AND ACID RD, CA 0.5 AIR MI NNW OF SPRING BAYO CHURCH.			PRAIRIES INCL. REMNANTS OF THIS FLORA ON ROADSIDES AND FIELDS.
PDASTBL0820167KY	SULPHUR LACINIUM VAR ROBINSONI	COMPASS PLANT	KY	1993-07	♂	McCacken	HEATH	BOTH SIDES OF UNNAMED GRAVEL RD, CA 0.1 AIR M S OF SOUTH ACID RD (MARGNUM 23, 37056N, 88484W), (MARGNUM 24, 37053N, 88484W), (MARGNUM 25, 37054N, 88485W), (MARGNUM 26, 37055N, 88485W).			PRAIRIES INCL. REMNANTS OF THIS FLORA ON ROADSIDES AND FIELDS.
***Gastropod											
INGAS51007009KY	LEPTOXIS PRAEROSA	ONYX ROCKSNAIL	KY	1989-10-18	♂	McCacken	JOPPA	OHIO RIVER AT MILE 948.0, LITTLE CHAIN BAR.			CALL (185) INDICATED THAT IN THE OHIO RIVER AT THE FALLS IT OCCURRED IN THE GREATEST PROFUSION WHERE THE BOTTOM IS CLEAN ROCK OR ROCK WITH ABUNDANT CONIFEROID VEGETATION.
INGAS61007233KY	LITHASIA VERRUCOSA	VARICOSE ROCKSNAIL	KY	1989-10-08	♂	McCacken	JOPPA	OHIO RIVER AT MILE 948.0, LITTLE CHAIN BAR.			OBSERVATIONS ON THE HABITAT INCLUDE SPECIMENS TAKEN FROM RECENTLY EXPOSED BARS AND POOLS WITH SAND, GRAVEL, AND ROCK SUBSTRATES (HAAG AND PALMER-BALL, PEFS COMM).

ECCODE	SNAME	SCONNAME	SRANK	SPROT	USSPA	DENT	LASTOS	ERANK	COUNTY	75 MINUTE QUARANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
**Bivalves													
MBIV2110154*KY	LAMPSILUS ABRUPTA	PINK MICKET	♂	5	m	Y	2001-06-31	♂	McCracken	JOPPA	OHIO RIVER AT KY SHORE.	OHIO RIVER MILE 948.3, CA 120 M FROM KY SHORE.	APPARENTLY MORE COMMONLY FROM GRAVEL AND COBBLE, COLLECTED FROM SHALLOW AND DEEP WATER WITH CURRENT VELOCITY RANGING FROM ZERO TO SWIFT (AHLSTEDT 1983; BOGAN AND PARMALEE 1983; BUCHANAN 1980), BUT NEVER STANDING POOLS OF WATER (LAURSEN PARMALEE 1987; STANSBERRY 1976), BUT OCCURS IN MEDIUM-SIZED STREAMS IN GRAVEL, SAND, OR EVEN MUD (PARMALEE 1987; JOHNSON 1970; GORDON AND LATZER 1989). IN THE LOWER WABASH AND OHIO RIVERS SPECIMENS WERE TAKEN IN DEEP WATER (6-10 FEET OR MORE) IN CURRENT FROM SAND
MBIV2130739*KY	LAMPSILUS OVATA	POCKETBOOK	♀	5	m	Y	1954-06-30	♂	McCracken	JOPPA	OHIO RIVER BETWEEN METROPOLIS AND JOPPA (PLOTTED AT MIDPOINT).	OHIO RIVER AT HILLERMAN, IL.	USUALLY FOUND IN LARGE RIVERS IN SAND AND GRAVEL SUBSTRATES (AHLSTEDT 1983; BOGAN AND PARMALEE 1983; MILLER, A.C. ET AL. 1986).
MBIV340207632*KY	PLETHOBASIS COOPERIANUS	ORANGEFOOT PIMPLEBACK	♂	5	m	Y	1907-08-18	♂	McCracken	BANDANA	OHIO RIVER AT LITTLE CHAIN BAR CA R MI 948.	OHIO RIVER AT LITTLE CHAIN BAR CA R MI 948.	USUALLY FOUND IN LARGE RIVERS IN SAND AND GRAVEL SUBSTRATES (AHLSTEDT 1983; BOGAN AND PARMALEE 1983; MILLER, A.C. ET AL. 1986).
MBIV340207653*KY	PLETHOBASIS COOPERIANUS	ORANGEFOOT PIMPLEBACK	♂	5	m	Y	1999-08-07	♂	McCracken	JOPPA	OHIO RIVER MILE 948.4, CA 120 M FROM KY SHORE.	OHIO RIVER MILE 948.4, CA 120 M FROM KY SHORE.	USUALLY FOUND IN LARGE RIVERS IN SAND AND GRAVEL SUBSTRATES (AHLSTEDT 1983; BOGAN AND PARMALEE 1983; MILLER, A.C. ET AL. 1986).
MBIV340207656*KY	PLETHOBASIS COOPERIANUS	ORANGEFOOT PIMPLEBACK	♂	5	m	Y	2001-06-31	♂	McCracken	JOPPA	OHIO RIVER BETWEEN METROPOLIS AND JOPPA (PLOTTED AT MIDPOINT).	OHIO RIVER AT JOPPA.	USUALLY FOUND IN LARGE RIVERS IN CURRENT ON MUD, SAND, OR GRAVEL BOTTOMS AT DEPTH OF 1-2 METERS OR MORE (BAKER 1928; PARMALEE 1987; GORDON AND LATZER 1989).
MBIV340307590*KY	PLETHOBASIS CYPHUS	SHEEPNOSE	♂	5	s	Y	1954-06-30	♂	McCacken	JOPPA	OHIO RIVER AT JOPPA.	OHIO RIVER AT JOPPA.	USUALLY FOUND IN LARGE RIVERS IN CURRENT ON MUD, SAND, OR GRAVEL BOTTOMS AT DEPTH OF 1-2 METERS OR MORE (BAKER 1928; PARMALEE 1987; GORDON AND LATZER 1989).
MBIV340307657*KY	PLETHOBASIS CYPHUS	SHEEPNOSE	♂	5	s	Y	1955-05-17	♂	McCacken	JOPPA	OHIO RIVER AT LITTLE CHAIN BAR, CA MI 948.3.	OHIO RIVER AT LITTLE CHAIN BAR, CA MI 948.3.	USUALLY FOUND IN LARGE RIVERS IN CURRENT ON MUD, SAND, OR GRAVEL BOTTOMS AT DEPTH OF 1-2 METERS OR MORE (BAKER 1928; PARMALEE 1987; GORDON AND LATZER 1989).
MBIV340307655*KY	PLETHOBASIS CYPHUS	SHEEPNOSE	♂	5	s	Y	1907-08-18	♂	McCacken	BANDANA	OHIO RIVER AT HILLERMAN, IL.	OHIO RIVER AT HILLERMAN, IL.	USUALLY FOUND IN LARGE RIVERS IN CURRENT ON MUD, SAND, OR GRAVEL BOTTOMS AT DEPTH OF 1-2 METERS OR MORE (BAKER 1928; PARMALEE 1987; GORDON AND LATZER 1989).
MBIV340307657*KY	PLETHOBASIS CYPHUS	SHEEPNOSE	♂	5	s	Y	1999-08	♂	McCacken	JOPPA	OHIO RIVER AT KY SHORE.	OHIO RIVER AT KY SHORE.	USUALLY FOUND IN LARGE RIVERS IN CURRENT ON MUD, SAND, OR GRAVEL BOTTOMS, AND SOMETIMES IN DITCHES, IN MUD (COZE); MIXED SAND, MUD, AND CLAY, OR FINE SILT AND MUD IN FLOWING WATER AT DEPTHS OF A FEW INCHES UP TO EIGHT FEET (PARMALEE 1987; AHLSTEDT AND JENKINSON 1987; CUMMINGS AND MAYER 1983; CUMMINGS ET AL. 1990).
MBIV370307001*KY	POTAMILUS CAPAX	FAT POCKETBOOK	♂	5	m	Y	1907-08	♂	McCacken	BANDANA	OHIO RIVER AT CA R MI 145.6 BAR AT POWERLINE CROSSING.	OHIO RIVER AT CA R MI 145.6 BAR AT POWERLINE CROSSING.	BACK CHANNELS, AND SOMETIMES IN DITCHES, IN MUD (COZE); MIXED SAND, MUD, AND CLAY, OR FINE SILT AND MUD IN FLOWING WATER AT DEPTHS OF A FEW INCHES UP TO EIGHT FEET (PARMALEE 1987; AHLSTEDT AND JENKINSON 1987; CUMMINGS AND MAYER 1983; CUMMINGS ET AL. 1990).
MBIV370307029*KY	POTAMILUS CAPAX	FAT POCKETBOOK	♂	5	m	Y	1999-08-07	♂	McCacken	JOPPA	OHIO RIVER AT KY SHORE.	OHIO RIVER AT KY SHORE.	SMALL TO LARGE RIVERS WITH SAND, GRAVEL, AND CORBLE, AND MODERATE TO SWIFT CURRENT, SOMETIMES IN DEEP WATER (PARMALEE 1987; BOGAN AND PARMALEE 1983).
MBIV39041*041*KY	QUADRILLA CYLINDRICA CYLINDRICA	RABBITSFoot	♂	3	—	Y	1907-08-18	♂	McCacken	BANDANA	OHIO RIVER AT HILLERMAN, IL.	OHIO RIVER AT HILLERMAN, IL.	MODERATE TO SWIFT CURRENT, SOMETIMES IN DEEP WATER (PARMALEE 1987; BOGAN AND PARMALEE 1983).

ECODE	SHANE	SCOMNAME	RANK	SPROT	DENT	LASTBS	RECB	COUNTY	7.5 MINUTE QUADRANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
***Outstanding												
MENIV30411039TKY	QUADRILA CYLINDRICA CYLINDRICA	RABBITSFOOT	G3T3	♂	Y	1987-05-21	♂	McCracken	JOPPA	OHIO RIVER, ORN 95, AT END OF ROAD THAT PASSES E SIDE OF METROPOLIS LAKE, 10 M NW OF PADUCAH.	OHIO RIVER, ORN 96 AND DRIVE Y TO HWY 305 (ACTUALLY END OF HWY 96 AND DRIVE Y TO WHERE IT LIVES AMONG ORGANIC DEBRIS, USUALLY NEAR BALD CYPRESS FOREST AND HORSES 1985).	SMALL TO LARGE RIVERS WITH SAND, GRAVEL, AND COBBLE AND OXBOW LAKES AND STREAMS ON THE GULF COASTAL PLAIN (PAGE 195).
ICMAM11067104TKY	ORCONECTES LANCFER	A CRAYFISH	G5	♂	Y	1975-04-26	♂	McCracken	JOPPA	METROPOLIS LAKE 4.8 KM IN GRAHAMVILLE NEAR END OF HWY 305 (ACTUALLY END OF HWY 96 AND DRIVE Y TO WHERE IT LIVES AMONG ORGANIC DEBRIS, USUALLY NEAR BALD CYPRESS FOREST AND HORSES 1985).	OXBOW LAKES AND STREAMS ON THE GULF COASTAL PLAIN (PAGE 195).	MEDIUM TO SWIFT CURRENT, SOMETIMES IN DEEP WATER (PARMALEE 1987, BOGAN AND PARMALEE 1984).
***Fishes												
AFCGA20107002TKY	ATTRACTOSTEUS SPATULA	ALLIGATOR GAR	G34	♂	w	1975-06-27	♂	McCacken	JOPPA	OHIO RIVER AT SHAWNEE STEAM PLANT, NEAR PADUCAH.	OHIO RIVER AT SHAWNEE STEAM PLANT, NEAR PADUCAH.	SLUGGISH POOLS AND BACKWATERS OF LARGE RIVERS, BACKWATERS, AND OXBOW LAKES (BURR AND WARREN 1986; PAGE AND BURR 1981; ETHER AND STARIES 1983).
AFCIC05207008TKY	ERINYZON SUSETTA	LAKE CHUBSUCKER	G5	♂	Y		♂	McCacken	JOPPA	OHIO RIVER, SHAWNEE STEAM PLANT W OF PADUCAH.	OHIO RIVER, SHAWNEE STEAM PLANT W OF PADUCAH.	LOWLAND LENTIC HABITATS (WETLANDS AND FLOODPLAIN LAKES) WITH SUBMERGED AND FLOATING VEGETATION (BURR AND WARREN 1986; ETHER AND STARIES 1983).
AFCHD10401003TKY	ESOX NIGER	CHAIN PICKEREL	G5	♂	s	1972-05-28	♀	McCacken	JOPPA	METROPOLIS LAKE, 4.8 KM IN GRAHAMVILLE.	METROPOLIS LAKE, 4.8 KM IN GRAHAMVILLE.	COASTAL PLAIN WETLANDS, STREAMS, AND VEGETATED OXBOW LAKE SHORELINES, AND IT ALSO TOLERATES RESERVOIR CONDITIONS (BURR AND WARREN 1986; ETHER AND STARIES 1983).
AFCJ61630104TKY	HYBOGNATHUS HAYI	CYPRESS MINNOW	G5	♂	w	1985-07-21	♂	McCacken	JOPPA	METROPOLIS LAKE, 3 MI IN GRAHAMVILLE.	METROPOLIS LAKE, 3 MI IN GRAHAMVILLE.	COASTAL PLAIN BUT OCCASIONALLY ASSOCIATED WITH SUBMERGED AQUATIC VEGETATION OF OTHER COVER (BURR AND WARREN 1986; PEILEGER 1975; SMITH 1979; GILBERT 1980; BURR ET AL. 1980). NEEDS WETLANDS ADJACENT CONSISTS OF GRAVEL AND RUBBLE WITH AREAS OF SAND AND SILT.
AFBAA010227006TKY	ICHTHYOMYZON CASTANEUS	CHESTNUT LAMPREY	G5	♂	s	1951-	♂	McCacken	JOPPA	OHIO RIVER AT JOPPA, ILLINOIS.	OHIO RIVER AT JOPPA, ILLINOIS.	LARVAE REQUIRE CLEAR STREAMS WITH STABLE BARS OF SILT, SAND AND ORGANIC DETRITUS (BECKER 1983; PEILEGER 1975; ROHDE AND LANTEIGNE-COURCHERE 1980; SCOTT AND CROSSMAN 1973, SMITH 1979).
AFBA010227007TKY	ICHTHYOMYZON CASTANEUS	CHESTNUT LAMPREY	G5	♂	s	1951-	♂	McCacken	METROPOLIS	OHIO RIVER AT METROPOLIS, ILLINOIS.	OHIO RIVER AT METROPOLIS, ILLINOIS.	CONSISTS OF GRAVEL AND RUBBLE WITH AREAS OF SAND AND SILT.
AFBA010227010TKY	ICHTHYOMYZON CASTANEUS	CHESTNUT LAMPREY	G5	♂	s	1974-04-17	♂	McCacken	JOPPA	OHIO RIVER, AT SHAWNEE STEAM PLANT.	OHIO RIVER, AT SHAWNEE STEAM PLANT.	LARVAE REQUIRE CLEAR STREAMS WITH STABLE BARS OF SILT, SAND AND ORGANIC DETRITUS (BECKER 1983; PEILEGER 1975; ROHDE AND LANTEIGNE-COURCHERE 1980; SCOTT AND CROSSMAN 1973, SMITH 1979).
AFCJ070307016TKY	ICTOBUS NIGER	BLACK BUFFALO	G5	♂	s	1987-08-30	♀	McCacken	JOPPA	OHIO RIVER, SHAWNEE STEAM PLANT, NW OF PADUCAH.	OHIO RIVER, SHAWNEE STEAM PLANT, NW OF PADUCAH.	RESERVOIRS AND MEDIUM TO LARGE RIVERS WITH MODERATE TO LOW GRADIENT AND SOMETIME SWIFT CURRENT (BECKER 1983; PEILEGER 1975; SMITH 1979; TRAUTMAN 1981; AND BURR AND WARREN 1986).
AFCJ070307026TKY	ICTOBUS NIGER	BLACK BUFFALO	G5	♂	s	1986-04	♂	McCacken	JOPPA	LITTLE BAYOU CREEK (AT UNNAMED RD NR HOPPER CEMETERY CA 2.0 AIR KM NW OF KY 984 X KY 1420 JC).	LITTLE BAYOU CREEK (AT UNNAMED RD NR HOPPER CEMETERY CA 2.0 AIR KM NW OF KY 984 X KY 1420 JC).	RESERVOIRS AND MEDIUM TO LARGE RIVERS WITH MODERATE TO LOW GRADIENT AND SOMETIME SWIFT CURRENT (BECKER 1983; PEILEGER 1975; SMITH 1979; TRAUTMAN 1981; AND BURR AND WARREN 1986).

EOCODE	SNAME	SCOMMNAME	RANK	SPROT	DENT	LASTOBS	COUNTY	7.5 MINUTE QUADRANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
AFC/COT0307027'XY	ICTIBUS NIGER	BLACK BUFFALO	♂	♂	Y	1997-03	♂	McCracken	JOPPA	BIG BAYOU CREEK [CA. 0.4 STREAM KM S OF WEST BOONE RD CROSSING].	RESERVOIRS AND MEDIUM TO LARGE RIVERS WITH MODERATE TO LOW GRADIENT AND SOMEWHAT SWIFT CURRENT (BICKER 1983; PEILEGER 1975, SMITH 1975; TRAUTMAN 1981, AND BURR AND WARREN 1986).
AFC/CBT11201032'XY	LEPOMIS MINIATUS	REDSPOTTED SUNFISH	♂	♂	Y	1997-03	♂	McCracken	HEATH	LITTLE BAYOU CREEK AT KY 338 [SITE 12].	OCCLUSIONS IN WELL-VEGETATED SWAMPS, SLoughS, BOTTOMLAND LAKES, AND LONG GRADIENT STREAMS (BURR AND MAYDEN 1978; PEILEGER 1975, SMITH 1975; BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/CBT11201033'XY	LEPOMIS MINIATUS	REDSPOTTED SUNFISH	♂	♂	Y	1996-04	♂	McCracken	JOPPA	LITTLE BAYOU AT UNNAMED RD [SITE 10] IN R. HOPPER CEMETERY CA 2.0 AIR KM NW OF KY 968 (KT 1420 AC). BIG BAYOU CREEK AT BOLDRY RD, 2.8 RIVER KM FROM MOUTH [SITE 14].	OCCLUSIONS IN WELL-VEGETATED SWAMPS, SLoughS, BOTTOMLAND LAKES, AND LONG GRADIENT STREAMS (BURR AND MAYDEN 1978; PEILEGER 1975, SMITH 1975; BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/CBT11201034'XY	LEPOMIS MINIATUS	REDSPOTTED SUNFISH	♂	♂	Y	1996-06	♂	McCracken	JOPPA	METROPOLIS LAKE, 4.3 KM N OF GRAHAMVILLE.	OCCLUSIONS IN WELL-VEGETATED SWAMPS, SLoughS, BOTTOMLAND LAKES, AND LONG GRADIENT STREAMS (BURR AND MAYDEN 1978; PEILEGER 1975, SMITH 1975; BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/CBT11201037'XY	LEPOMIS MINIATUS	REDSPOTTED SUNFISH	♂	♂	Y	1996-04-02	♂	McCracken	JOPPA	OHIO RIVER NEAR JOPPA.	SCHOOLING SURFACE FISH THAT OCCURS IN THE MISSISSIPPI RIVER AND FLOODPLAIN LAKES (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/ND02010109'XY	MENIDIA BERYLINA	INLAND SILVERSIDE	♂	♂	Y	1992-06-04	♂	McCracken	JOPPA	OHIO RIVER MILE 944-948, NEAR SHAWNEE STEAM PLANT.	SCHOOLING SURFACE FISH THAT OCCURS IN THE MISSISSIPPI RIVER AND FLOODPLAIN LAKES (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/ND02010109'XY	MENIDIA BERYLINA	INLAND SILVERSIDE	♂	♂	Y	1992-09-25	♂	McCracken	JOPPA	OHIO RIVER NEAR JOPPA.	SCHOOLING SURFACE FISH THAT OCCURS IN THE MISSISSIPPI RIVER AND FLOODPLAIN LAKES (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/ND020101012'XY	MENIDIA BERYLINA	INLAND SILVERSIDE	♂	♂	Y	1993-07-21	♂	McCracken	JOPPA	METROPOLIS LAKE AT BOAT RAMP.	SCHOOLING SURFACE FISH THAT OCCURS IN THE MISSISSIPPI RIVER AND FLOODPLAIN LAKES (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/B285507002'XY	NOTROPS MACULATUS	TAILLIGHT SHINER	♂	♂	Y	1998-04-02	♂	McCracken	JOPPA	METROPOLIS LAKE, 5 KM IN GRAHAMVILLE.	SCHOOLING SURFACE FISH THAT OCCURS IN THE MISSISSIPPI RIVER AND FLOODPLAIN LAKES (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/K422207014'XY	NOTURUS STIGMOSUS	NORTHERN MADTOM	♂	♂	Y	1999-09-08	♂	McCracken	JOPPA	OHIO RIVER AT SHAWNEE STEAM PLANT, NW OF PADUCAH.	LARGE STREAMS AND RIVERS IN MODERATE TO SWIFT CURRENT OVER GRAVEL AND SAND, AND SOMETIMES DEBRIS OR CONDUED FOR COVER (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
AFC/K422207037'XY	NOTURUS STIGMOSUS	NORTHERN MADTOM	♂	♂	Y	1999-09-08	♂	McCracken	JOPPA	OHIO R AT LITTLE CHAIN BAR.	LARGE STREAMS AND RIVERS IN MODERATE TO SWIFT CURRENT OVER GRAVEL AND SAND, AND SOMETIMES DEBRIS OR CONDUED FOR COVER (BURR AND WARREN 1986; ETNIER AND STARNES 1993).
CIRCA 0.3 AIR M/SW OF TIP OF SHAWNEE STEAM PLANT SETTLING PONDS, BUTTORNISH AND HERAFORD'S EMBERGENT DEPOSITION											
** Amphibians											
AAAACDC20501035'XY											
HYLA CINerea	GREEN TREEFROG	♂	♂	Y	1991-06-28	♂	McCracken	JOPPA			

EDCODE	SNAME	SCOMNAME	STATE	LAST OBS	RECD	COUNTY	7.5 MINUTE QUADRANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
AAACD02080734KY	HYLA CINerea	GREEN TREEFROG	KY	1991-06-25	o	McCracken	JOPPA	WEST KENTUCKY WILDLIFE MANAGEMENT AREA, CA 1.4 AIR MI NW OF THE TIP OF THE NARROW SHANNON STEAM PLANT SETTLING POND.		FLOODPLAIN WETLANDS, PARTICULARLY THOSE DOMINATED BY BUTTONBUSH AND HERBACEOUS EMERGENT VEGETATION.
AAABH0101472497KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1994-03-07	o	McCracken	PADUCAH WEST			BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101405050KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1994-03-13	≥	McCracken	HEATH	US 60, 0.6 MI E OF FUTURE CITY, 10 MI W OF PADUCAH.		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470111KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-05-18	o	McCracken	JOPPA	MARTIN CEMETERY S SIDE KY 350 CA 0.6 RD NW JCT BETHEL CHURCH RD.		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470077KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-05-20	o	McCracken	HEATH	CIRCA 0.2 AIR MI E OF KY 1154, CA 1.2 RD NW N OF TS-JCT W US 80.		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470137KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-05-18	o	McCracken	JOPPA	CIRCA 0.2 RD MI E OF BETHEL CHURCH RD, CA 1.0 RD M/S JCT KY 358 AND BETHEL CHURCH ROAD [MARGINUM 34, 370748N, 884841W].		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470095KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-05-18	o	McCracken	HEATH	WEST KENTUCKY WILDLIFE MANAGEMENT AREA, A SIDE WATER WORKS RD JUST W OF FILTRATION PLANT, MINNIV JCT KY 358 AND OGDEN LANDING RD [MARGINUM 14].		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470109KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-05-20	o	McCracken	HEATH	WEST KY WMA, CA 1.3 RD NW JCT KY 986 AND KY 338 ON N SIDE KY 358 [MARGINUM 15, 370723N, 884723W], WEST KY WMA, KY 986 AND KY 338, 0.15 AIR M/S OF WEST KENTUCKY WILDLIFE MANAGEMENT AREA, CA 0.1 RD M/N W OF JCT KY 358 AND KY 985, DOWN ROAD JUST SE OF LODGE [MARGINUM 36], AND CA 0.15 RD MINNIV OF JCT KY 358 AND KY 985, DOWN RD JUST SE OF LODGE [MARGINUM 39].		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470155KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1998-02-27	o	McCracken	JOPPA	WEST KENTUCKY WILDLIFE MANAGEMENT AREA, CA 0.6 RD MI SW OF JCT KY 985 AND KY 338, CA 0.15 AIR M/W OF KY 905, CA 0.5 RD MI SW OF AREA OFFICE (LOGE).		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
AAABH0101470085KY	RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG	KY	1991-03-18	o	McCracken	JOPPA	CIRCA 0.3 AIR MI NW OF SPRING BAYOU CHURCH ON KY 725 [MARGINUM 11], CA 0.75 RD MINNIV OF SPRING BAYOU CHURCH ON KY 725 ON N SIDE OF RD [MARGINUM 12, 370544N, 885000W].		BREDS IN PONDS IN FARMLAND AND EDGE, REMAINS UNDERGROUND THROUGHOUT MOST OF THE YEAR, USING CRAYFISH BURROWS IN MOIST GRASSLANDS AND MEADOWS.
ARAAG0227008KY	APALONE NUTICA NUTICA	MIDLAND SMOOTH SOFTSHELL	KY	1985-07-16	o	McCracken	METROPOLIS	OHIO RIVER, NEAR BOAT RAMP ACROSS FROM JOPPA [ASSUMED TO MEAN METROPOLIS], IL.		OPEN WATER HABITATS, MOST NUMEROUS IN OPEN RIVER SITUATIONS WITH GRAVEL OR SAND SUBSTRATES, BUT ALSO PRESENT IN SLOWER RIVERS AND IMPOUNDMENTS.

***Reptiles

Pesticides And Communities Recorded for the Proposed DUF6 Conversion Facility at the Paducah Gaseous Diffusion Plant

Palestine Communications

Rare Species And Communities Recorded for the Proposed DUF₆ Conversion Facility at the Paducah Gaseous Diffusion Plant.

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8/12/02

KSMPC

Data Request No. 03-022

EPCODE	SNAME	SCOMNAME	CRANK	SPROT	USESAA	DENT	LASTBOS	PREC	PERANK	1.5 MINUTE	QUADRANGLE	EPA WATERBODY	DIRECTIONS	HABITAT
CYPEROIDESTRICKY	FOREST	ECOPLAN RIDGE TERRACE					1991-16	0	McMicken		JOPPA			WEST KY WILDLIFE MANAGEMENT AREA, BAYOU CREEK WOODS, CA 20 ACRE NW OF SHAWNEE STEAM PLANT.

60 Records Processed.