EXHIBIT B-4

West Bay Exploration Co. Endangered Species Site Assessment

West Bay Exploration Company (WBEC), Haystead #9 SWD
(Permit #MI-079-2D-0010**)**

Administrative Record
Item # 13

March 19, 2012

Eric R. Johnson, Westshore Consulting

WESTSHORE
CONSULTING
Engineers ■ Scientists ■ Surveyors

WestshoreConsulting.com

Muskegon
2534 Black Creek Road
Muskegon, Michigan 49444
Ph: (231) 777-3447
Fx: (231) 773-3453

Grand Haven
(616) 844-1260

Manistee
(231) 920-5818

March 19, 2012

Mr. Timothy Elkins
Underground Injection Control
U.S. EPA – Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: USEPA File: WU-16J
Additional Information Requested for the Haystead SWD #9 Injection Well, Permit Application #MI-075-2D-0010

Dear Mr. Elkins:

This letter is in response to your *Additional Information Requested for the Haystead SWD #9 injection well* letter date stamped February 10, 2012 regarding West Bay Exploration Company's (West Bay) permit application referenced above (Appendix A). The Haystead SWD #9 injection well is located in Section 9, T4S, R2E, Norvell Township, Jackson County, Michigan (Figure 1). Following are responses to question number 3 outlined in your letter regarding whether the injection well will adversely impact endangered and threatened species.

a. A list of endangered, threatened, and candidate species in the county in which the well is located. Species are listed by state and county at http://www.fws.gov/midwest/endangered/section7/sppranges/index.html. Generally, two or three species are listed in each county.

On February 20, 2012, Westshore Consulting (Westshore) consulted the U.S. Fish and Wildlife Service (USFWS) website, to determine whether the Section 7 list of Federally endangered, threatened, proposed and/or candidate species were located within the location of the proposed injection well. The results of the USFWS search for Jackson County, Michigan included the Indiana Bat (*Myotis sodalis*) and Mitchell's Satyr Butterfly (*Neonympha mitchellii mitchellii*) as listed endangered species, and the Eastern Massasauga (*Sistrurus catenatus*) and Poweshiek Skipperling (*Oarisma poweshiek*) as endangered or threatened candidate species (Appendix B).

b. A summary of the critical habitat which, if present, may support one of the above-listed species. The web address above includes a brief description of the critical habitat for each species. More detailed information on critical habitat is found at http://www.fws.gov/midwest/endangered/section7/s7process/lifehistory.html.

Westshore evaluated the critical habitats necessary for the existence and propagation of the Indiana Bat (*Myotis sodalis*), Eastern Massasauga (*Sistrurus catenatus*), Mitchell's Satyr Butterfly (*Neonympha mitchellii mitchellii*), and Poweshiek Skipperling (*Oarisma poweshiek*).

- The Indiana Bat is dependent on well-developed riparian woods or woodlots located approximately 1 to 3 miles away from small to medium rivers and stream corridors (FWS, 2011).
- The Eastern Massasauga is dependent on a variety of wetlands and adjacent upland woodlots. The Eastern Massasauga is known to occupy wetland sites during the winter and spring, but has been known to utilize dry, upland sites during summer and late fall (DNR, 2012).
- The Mitchell's Satyr Butterfly is dependent on rare wetland fens with calcareous soils and natural carbonate-rich water seeps and springs (FWS, 2011).
- The Poweshiek Skipperling is restricted to wet prairies and fen wetlands (FWS, 2011).

c. A survey of the surface vegetation, soils, topography and hydrologic features in the area of review in sufficient detail to address the presence or absence of critical habitat for any endangered, threatened, or candidate species. This will include descriptions such as "mature mixed forest", "plowed field" or "stabilized dunes", and may also include specific trees or plants listed as critical to a species.

On February 23, 2012, Westshore conducted a regional and action area site assessment and survey of the Haystead SWD #9 project area. Mr. Eric R. Johnson, Wetland Scientist had full access to the action area and surrounding regional landscape for vegetation, soil, topographic and surface water evaluation and assessment. Site observations indicated the regional and action areas to be located in a predominantly upland agricultural landscape setting with associated depressional wetlands draining north to the River Raisin. Photographs taken during the site assessment are included in Appendix C.

Westshore observed evidence of post harvest corn, soybean and alfalfa crop to be located within the regional upland areas to the north, northwest, south, southeast, southwest, east and west of the action area. An observed depressional area consisting primarily of various juvenile Willow species (*Salix spp.*), Red-Osier Dogwood (*Cornus sericea*), Red Maple (*Acer rubrum*), Reed Canary Grass (*Phalaris arundinacea*), and miscellaneous herbaceous wetland species was located approximately 300 feet to the north and northeast of the action area (Figure 2). This depressional area can be characterized as a depressional, shrub-carr wetland.

General soil observations within the regional areas surrounding the action area ranged from a 10YR 2/1 black muck in the depressional areas, to poorly sorted 5YR 4/3 reddish brown silty sand with trace gravel to one-quarter of an inch in the upland agricultural areas.

A survey of the regional topography indicated a surface water flow to the north and northeast towards the River Raisin. Regional surface water features included an unnamed creek, the River Raisin, Norvell Lake and a depressional farm pond. A regional aerial photograph is included as Appendix D.

d. A description of the "action area" for the well and associated surface facilities. This will include dimensions of the affected area, such as the clearing in which the well is located, length of road or pipeline to be built, etc., as well as the extent of disruption of the area. For example, an existing well with no construction plan will be less disruptive

than a proposed well, and a proposed well in an open, plowed field will be less disruptive than one which requires some clearing of forest.

Westshore observed the project action area to be located entirely within a plowed, upland and open agricultural area. Evidence of post harvest, residual corn and soybean crop was observed in the action area. The observed soil within the action area was a poorly sorted 5YR 4/3 reddish brown silty sand with trace gravel to one-quarter of an inch. The topography of the action area was observed to flow to the north, northwest and northeast.

The action area will be an obtuse westerly extension of the existing Haystead 1-9A HD1 and Haystead 3-9 HD1 oil well pad (Figure 3). The Haystead SWD #9 action area will require minor clearing and leveling of plowed, upland agricultural field. The proposed Haystead SWD #9 well location is approximately 90 feet west of the Haystead 1-9A HD1 wellhead and will require the clearing of approximately 85 feet by 220 feet of open upland plowed agricultural field west from the western edge of the existing well pad and approximately 135 feet to the north and 85 feet to the south from the proposed Haystead SWD #9 injection well.

Access to the Haystead SWD #9 action area will be gained via the existing access road that serves the existing Haystead 1-9A HD1 and Haystead 3-9 HD1 well pad (Figure 2). All associated pipeline installation and work will utilize directional boring methods to avoid impact to existing local and regional wetland areas.

In conclusion, the Haystead SWD #9 project will not directly impact endangered, threatened, proposed and/or candidate species or the critical habitats necessary to the existence and propagation of those species listed under the USFWS Section 7. In addition, the Haystead SWD #9 well pad will be constructed prior to the onset of warmer, drier summer days when the Eastern Massasauga has been known to utilize the drier upland areas, prior to the migration of the Indiana Bat to summer roosting habitats, and will be located entirely in an upland, open and plowed agricultural field.

Please do not hesitate to contact West Bay or Westshore with additional questions, comments and/or clarifications.

Sincerely,

WESTSHORE CONSULTING

Eric Johnson JLG

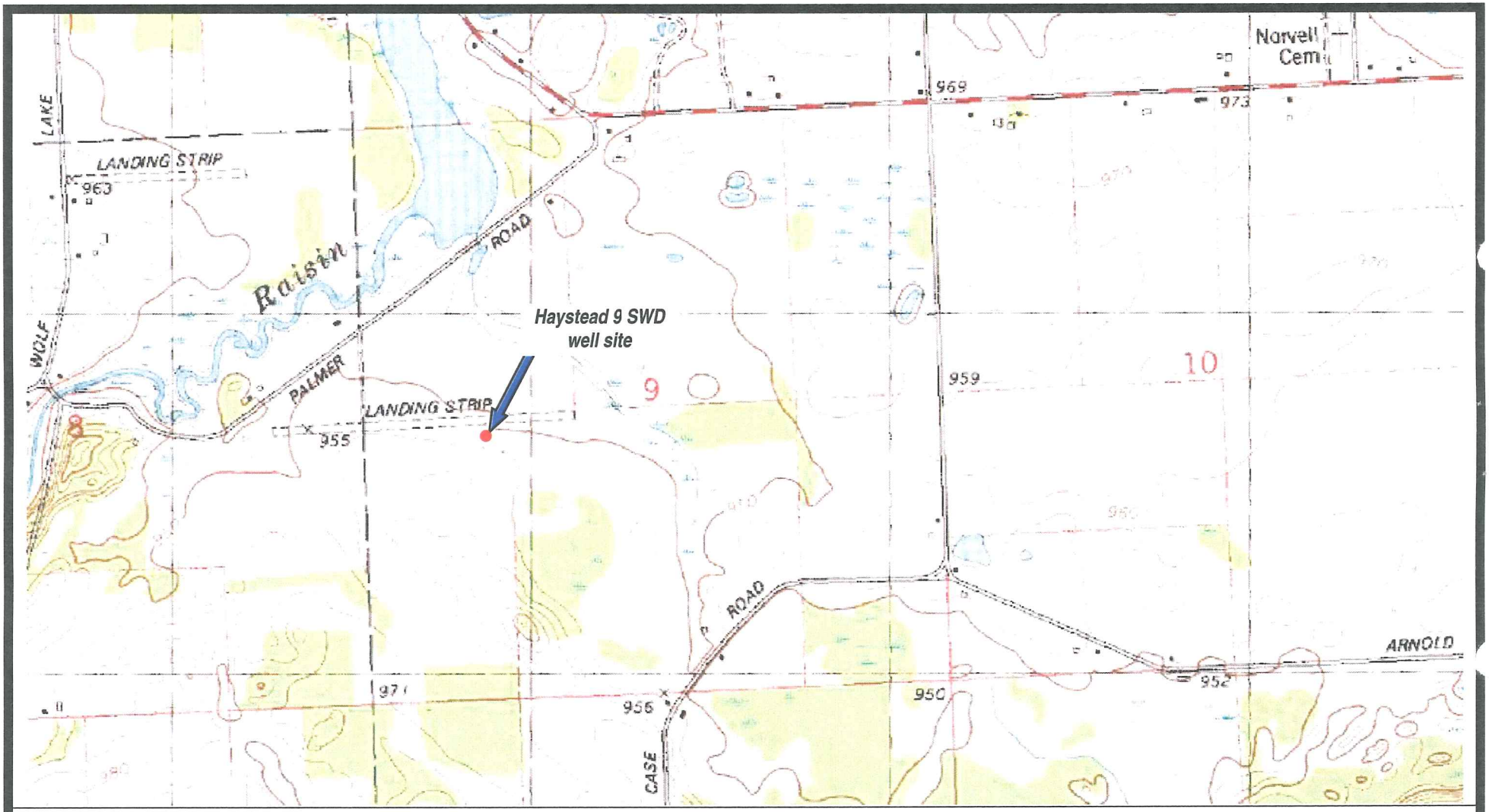
Eric R. Johnson
Wetland Scientist

ERJ/jlg/323-130

Figure 1 – Site Location Map
Figure 2 – Site Survey Map
Appendix A – US EPA letter dated February 10, 2012
Appendix B – Jackson County Michigan Endangered/Threatened Species
Appendix C – Site Photographs
Appendix D – Aerial Photograph of Action Area

cc: Mr. Tim Baker, West Bay Exploration Co.
Mr. Tim Brock, West Bay Exploration Co.
Mr. Robert Schulz, Westshore Consulting

Figures



TOPOGRAPHIC BASE: UNITED STATES GEOLOGICAL SURVEY, 7.5 MINUTE QUADRANGLE SERIES; NORVELL QUADRANGLE, MICHIGAN 1975; EDITED 1980

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Engineers ▪ Scientists ▪ Surveyors
www.WestshoreConsulting.com

Muskegon, MI
(231) 777-3447

Grand Haven, MI
(616) 844-1260

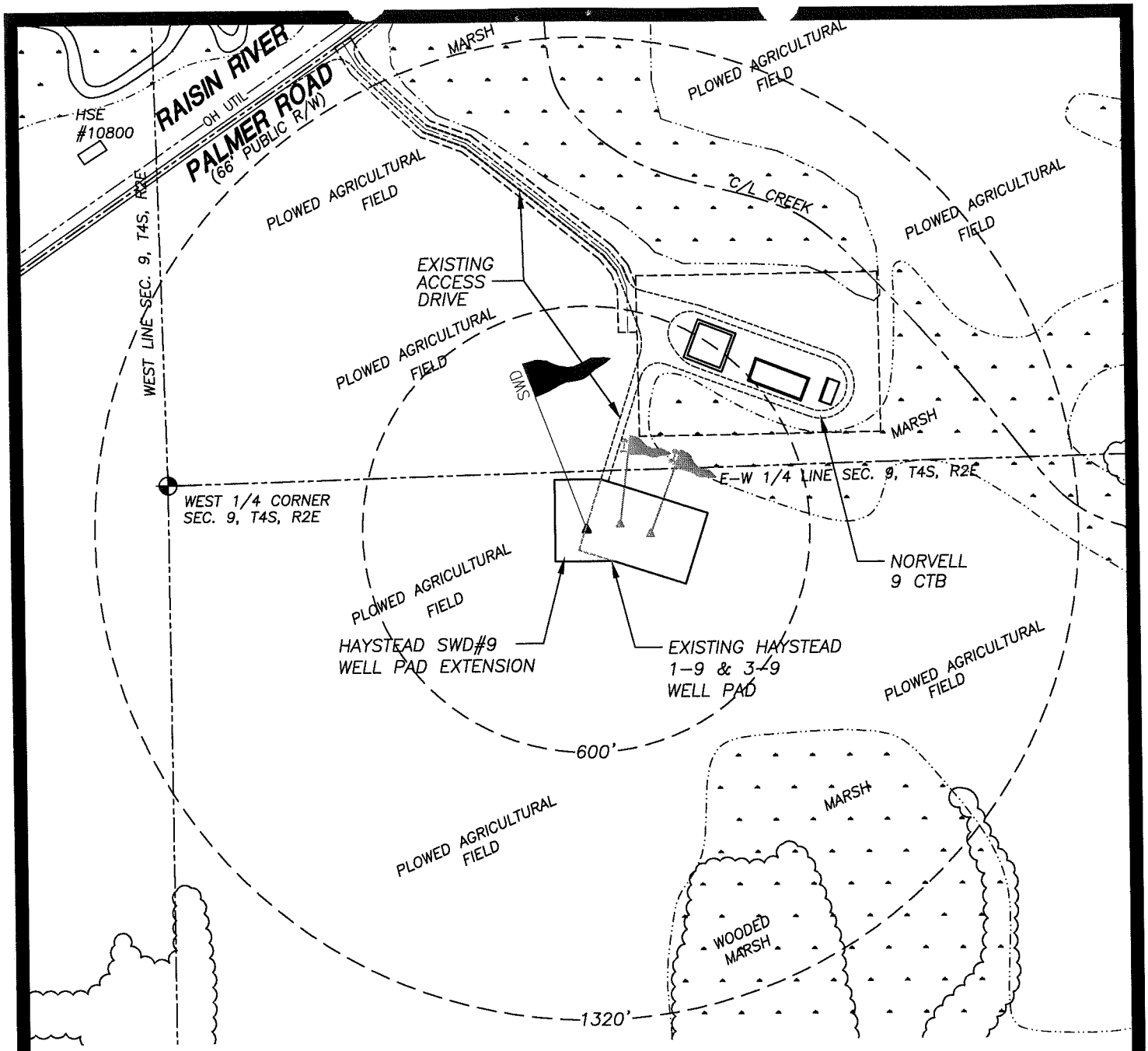
Manistee, MI
(231) 920-5818

Client:
West Bay Exploration Company

Site:
Haystead 9 SWD well site, Section 9, T4S, R2E,
Norvell Township, Jackson County, Michigan

SITE LOCATION MAP

Checked:	WAV
Date:	06/08/11
Drawn by:	JLG
Date:	06/08/11
File No.:	323-130
Figure:	1



LOCATION: 2459' FEET FROM THE SOUTH LINE AND 1122 FEET FROM THE WEST LINE OF SECTION 9, T4S, R2E, NORVELL TOWNSHIP, JACKSON COUNTY, MICHIGAN.

N14°E	976'	C/L CREEK
N21°E	761'	EDGE OF MARSH
N46°E	291'	EDGE OF MARSH
S32°E	682'	EDGE OF MARSH
N81°E	91'	HAYSTEAD 1-9/1-9A WELL
N30°E	530'	NORVELL 9 CTB
S86°E	171'	HAYSTEAD 3-9 WELL

0 200' 400'
SCALE: 1" = 400'

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors ■ Planners
www.WestshoreConsulting.com
2534 Black Creek Road, Muskegon, MI 49444, (231) 777-3447
250B Washington Avenue, Grand Haven, MI 49417, (616) 844-1260
P.O. Box 7, Manistee, MI 49660, (231) 920-5818

WEST BAY EXPLORATION COMPANY
13685 South West Bay Shore Dr.
Traverse City, Mi. 49684

SURVEY OF THE HAYSTEAD 9 SWD WELL LOCATED IN SECTION 9, T4S, R2E, NORVELL TWP, JACKSON CO.

Checked:	SW
Date:	3/16/11
Drawn by:	WAV
Date:	3/16/11
File No.:	323-130
Figure:	2

C:\Land Projects 2004\323-130\dwg\323-130 PERMITS.dwg 3/16/2011 4:33:34 PM EDT

Appendix A

US EPA letter dated February 10, 2012

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 10 2012

REPLY TO THE ATTENTION OF:
WU-16J

CERTIFIED MAIL 7009 1680 0000 7644 1025
RETURN RECEIPT REQUESTED

Timothy Brock
West Bay Exploration Company
13685 South West Bay Shore Drive, Suite 200
Traverse City, Michigan 49684

Re: Additional Information Requested for the Haystead SWD #9 injection well, U.S. Environmental Protection Agency (EPA) Underground Injection Control (UIC) Permit Application #MI-075-2D-0010

Dear Mr.Brock,

I have reviewed your permit application for the injection well referenced above. At this time I am unable to complete the processing of the permit application in the absence of the information listed below:

1. A letter from West Bay Exploration Company which authorizes Timothy Brock to sign UIC applications and other related UIC documents.

2. Cementing tickets or similar documentation which indicates the slurry volume of Flowstop and HalCem cement used in the cementing of Haystead 1-9A casings (well in the area of review).

3. In accordance with 40 CFR § 144.4 (c), the U. S. Environmental Protection Agency (EPA) is required to comply with the Endangered Species Act (ESA) when issuing permit decisions. Therefore, when considering a permit application or extension, the UIC Branch must consider the potential impacts from the new or existing injection well to endangered species present in the area. In order to determine whether an injection well will adversely impact endangered and threatened species, the UIC branch must have location-specific ecological information, such as the presence of certain vegetation, soils or surface water bodies. As a result, we are requiring the following information to be submitted in each permit application.

    a. A list of endangered, threatened, and candidate species in the county in which the well is located. Species are listed by state and county at http://www.fws.gov/midwest/endangered/section7/sppranges/index.html. Generally, two or three species are listed in each county (see enclosed example).

b. A summary of the critical habitat which, if present, may support one of the above-listed species. The web address above includes a brief description of the critical habitat for each species. More detailed information on critical habitat is found at http://www.fws.gov/midwest/endangered/section7/s7process/lifehistory.html.

c. A survey of the surface vegetation, soils, topography and hydrologic features in the area of review in sufficient detail to address the presence or absence of critical habitat for any endangered, threatened, or candidate species. This will include descriptions such as "mature mixed forest", "plowed field" or "stabilized dunes", and may also include specific trees or plants listed as critical to a species.

d. A description of the "action area" for the well and associated surface facilities. This will include dimensions of the affected area, such as the clearing in which the well is located, length of road or pipeline to be built, etc., as well as the extent of disruption of the area. For example, an existing well with no construction plan will be less disruptive than a proposed well, and a proposed well in an open, plowed field will be less disruptive than one which requires some clearing of forest.

This information must be certified in accordance with 40 CFR § 144.32(d). EPA recommends that this information be gathered in consultation with an ecologist, botanist, or other environmental professional.

If critical habitat is present, the permit is not automatically denied. EPA, in conjunction with the U.S. Fish and Wildlife Service, will examine more detailed information to determine the presence of endangered species in the area and the likelihood of negative impact to the species. Past experience has shown that very few projects pose any disturbance to endangered species in Region 5, and we do not expect this to change. We appreciate your cooperation in protecting these important species from endangerment and extinction.

I will be unable to proceed with the processing of your application until this information is received. Please compile and submit the requested information upon your receipt of this letter. If you have any questions regarding the requested information, feel free to call me at (312) 886-0263.

Sincerely yours,

Timothy Elkins, Environmental Scientist
Underground Injection Control

Enclosure

cc: Rick Henderson, Michigan DEQ

Appendix B

Jackson County Michigan
Endangered/Threatened Species

Jackson	Indiana bat (*Myotis sodalis*)	Endangered	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
	Eastern massasauga (*Sistrurus catenatus*)	Candidate	
	Mitchell's satyr butterfly (*Neonympha mitchellii mitchellii*)	Endangered	Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs
	*Poweshiek skipperling (*Oarisma poweshiek*)	Candidate	Wet prairie and fens

Appendix C

Site Photographs

Looking North from Action Area | 1

Looking South from Action Area | 2

Looking West from Action Area | 3

Looking Southeast from Action Area | 4

Site: Haystead SWD #9 injection well site, Section 9, T4S, R2E, Norvell Township, Jackson County, Michigan

Client: West Bay Exploration Company

File No.:	323-130
Photos By:	E. Johnson
Date:	02/23/12

WESTSHORE CONSULTING
Engineers ▪ Scientists ▪ Surveyors

Muskegon, MI
(231) 777-3447

Grand Haven, MI
(616) 844-1260

Manistee, MI
(231) 920-5818

Appendix D

Aerial Photograph of Action Area

VIEW OBTAINED FROM: Microsoft Bing Maps online, obtained on March 19, 2012

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www.WestshoreConsulting.com

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Grand Haven, MI (616) 844-1260
Manistee, MI (231) 920-5818

Client:
West Bay Exploration Company

Site:
Haystead 9 SWD well site,
Section 9, T4S, R2E, Norvell Township,
Jackson County, Michigan

RECENT AERIAL PHOTOGRAPH

Checked:	*RLS*
Date:	*03/19/12*
Drawn by:	*JLG*
Date:	*03/19/12*
File No.:	*323-130*
Appendix:	***D***