Appendix A

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ORAM v. 5.0 Field Form	Quantitative Rating		
Site: Calvert	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetlands:	WA-1	Rater:	H. Fogell, A. Davis
i cuanao.			

Subtotal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) 10 to <25 acres (4 to <10.1ha) (4 3 to <10 acres (1.2 to <4ha) (3 pt 0.3 to <3 acres (0.12 to <1.2ha) (4 X 0.1 to <0.3 acres (0.04 to <0.12ha) <0.1 acres (0.04ha) (0 pts) Metric 2. Upland buffers and surrou 2a. Calculate average buffer width (select one. X WIDE, Buffers average 50m (16- MEDIUM. Buffers average 25m the NEDIUM. Buffers average 25m the	a 6 pts) (5 pts) pts) (2pts) a) (1 pt) unding land use. <u>do not double check)</u> 4ft) or more around we o <50m (82 to <164ft) to <22ft	(max 14 pts) tland perimeter (7) around wetland perimeter (4) b around wetland perimeter (1)
	X VERY NARROW. Buffers average 2b. Intensity of surrounding land use (select or X VERY LOW. 2nd growth or older LOW. Old field (>10 years), shru MODERATELY HIGH. Residenti HIGH. Urban, industrial, open page Moderately High	ng <20m (32ft) around ne or double check & a forest, prairie, savann bland, young second g al, fenced pasture, par isture, row cropping, m	i wetland perimeter (0) <u>verage)</u> ah, wildlife area, etc. (7) rowth forest. (5) k, conservation tillage, new fallow field. (3) ining, construction. (1)
33 18 Subtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface wa Perennial surface water (lake or s	ter (3) stream) (5)	3d. Duration inundation/saturation. (select one or double check & average) Semi- to permanently inundated/saturated (4) X Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) 3a. Modifications to natural hydrologic regime.
	3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other h X Part of wetland/upland (e.g. fores X Part of riparian or upland corridor	uman use (1) t), complex (1) (1)	(select one or double check & average) None or none apparent (12) X Recovered (7) X Recovering (3) Recent or no recovery (1)
	3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)		Check all disturbances observed ditch point source (nonstormwater) dike filling/grading tile ✓ road bed/RR track weir dredging stormwater input other- list
46 13 Subtotal Points	Metric 4. Habitat Alteration and De 4a. Substrate disturbance. Score one or dour None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1)	evelopment. (max ble check and average	4c. Habitat alteration. Score one or double check and average. None or none apparent (9) X Recovered (6) Recovering (3)
	4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	Check all distur mowing grazing clearcutting selective cutting woody debris rer toxic pollutants	Recent or no recovery (1) bances observed shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging noval farming nutrient emrichment
46 subtotal this	page		

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ORAM v. 5.0 Field Form Quantitative Rating

58 GRAND TOTAL (max 100 pts)

ORAM v. 5.0 Field Form	Quantitative Rating		
Site: Calvert	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetland:	WA-1	Rater:	H. Fogell, A. Davis

wetiand:	VVA-1		Rater.	TI. POgell, A. Davis
subtotal first	page			
46 0	Metric 5. Special Wetlands. (max 10 pt	ts.)		
Subtotal Points	Check all that apply and score as indicated	,		
Gabiotal Politics	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)			
	Lake Erie coastal/tributary wetland-un	restricted hydrolog	ıy (10 pts)	
	Lake Erie coastal/tributary wetland-res	stricted hydrology	(5 pts)	
	Lake Plain Sand Prairies (Oak Openin	gs) (10 pts)		
	Relict Wet Prairies (10 pts)			
	Known occurrence state/federal threat	tened or endange	red species (10)	
	Significant migatory songbird/waterrow	of Qualitativa Bati	(10 pts)	
	Calegory I Welland. See Question I	or Quantative Rati	ng. (-10 pta)	
58 12	Metric 6. Plant Communities, interspe	rsion, microto	opography. (max 20 pts.)
ubtotal Points	6a. Wetland Vegetation Communities	Vogotatio	n Community Cover Sea	
	Score all present using 0 to 3 scale	vegetatio	Absent or comprises <0.1 ha (0 2471 acres) contiguous area
			Dresent and either comprises	anali port of wationd's
		1	vegetation and is of modera	ate quality, or comprises a
	1 Forest		significant part but is of low	quality
	0 Mudflats		Present and either comprises	significant part of wetland's
	0 Open water	2	vegetation and is of modera	ate quality or comprises a small
	0 Other (list)		part and is of high quality	
	6b. Horizontal (plan view) interspersion	3	Present and comprises signific vegetation and is of high qu	ant part, or more, of wetland's ality
	Select only one			
	High (5)	Narrative	Description of Vegetatio	on Quality
	Moderately high (4)	low	Low spp diversity and/or predo	ominance of nonnative or
	Moderate (3)			
			Native spp are dominant comp	ponent of the vegetation,
	None (0)	moderate	can also be present, and sp	becies diversity moderate to
			moderately high, but genera	ally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered s	spp
	Refer to Table 1 ORAM long form for list.		A predominance of native spec	cies with nonnative spp
		high	and/or disturbance tolerant	native spp absent or virtually
	Add or deduct points for coverage	1 agri	absent, and high spp divers	sity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threat	ened, or endangered spp
	Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Qu	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres)	l
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471 a	cres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47 a	acres 9.88 acres)
	<u>60. Witcrotopography</u> Score all present using 0 to 3 scale		rign 4 ha (9.88 acres) or more	3
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	3 Coarse woody debris >15 cm (6")	0	Absent	
	0 Standing dead > 25 cm (10") dbh		Present very small amounts or	if more common
	2 Amphibian breeding pools	1	of marginal quality	
		2	Present in moderate amounts, quality or in small amounts of	but not of highest of highest quality
		3	Present in moderate or greater	r amounts

Provisional Wetland Category:

Category 2

Background Information Form - ORAM v.5.0



ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

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Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-1	,	<u>e jang - jang - ing ika</u>

1: Critical Habitat		YES
2: Threatened or Endangered Species	✓ NO	T YES
3: Documented High Quality Wetland	⊡ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	V NO	YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	🗌 YES
8b: Mature Forested Wetlands	✓ NO	YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	⊡ NO	YES
9c: Hydrology unrestricted	⊡ NO	YES
9d: Native Species Predominate		VES
9e: Non-native Species Predominate	⊡ NO	YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland		
Category ORAM 5.0 Score		
1	0-29.9	
1 or 2 gray zone	30-34.9	
modified 2	35-44.9	
2	45-59.9	
2 or 3	60-64.9	
3	65-100	

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58 Category 2

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Table based on FEB 2001 OEPA Standards

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Site: Calvert	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetlands:	WA-2	Rater:	H. Fogell, A. Davis

	Restric 1 Motland Area (ciza) (may 6 ntc)	
Subtotal Points	Select one size class and assign score.	
	>50 acres (>20.2ha) (6 pts)	
	25 to <50 acres (10.1 to <20.2ha) (5 pts)	
	3 to <10 acres (1.2 to <4ha) (3 pts)	
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)	
	X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)	
	<0.1 acres (0.04ha) (0 pts)	
15 14	Metric 2 Unland buffers and surrounding	land use (max 14 pts)
Subtotal Points	2a. Calculate average buffer width (select one, do not o	louble check)
	X WIDE. Buffers average 50m (164ft) or mo	bre around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m	(82 to <164ft) around wetland perimeter (4)
	NARROW. Buffers average 10m to <25r	n (32ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m	(<32ft) around wetland perimeter (0)
	2b. Intensity of surrounding land use (select one or dou	ble check & ave <u>rage)</u>
	X VERY LOW. 2nd growth or older forest, p	rairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, yo	ung second growth forest. (5)
	MODERATELY HIGH. Residential, fence	d pasture, park, conservation tillage, new fallow field. (3)
36 21	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/saturation.
Subtotal Points	3a. Sources of Water. Score all that apply.	(select one or double check & average)
	High pH groundwater (5)	X Semi- to permanently inundated/saturated (4)
	X Other groundwater (3)	Regularly inundated/saturated (3)
	X Precipitation (1)	Seasonally inundated (2)
	X Seasonal/Intermittent surface water (3)	
		3) 3e. Modifications to natural hydrologic regime.
	3b. Connectivity. Score all that apply.	(select one or double check & average)
	100 year floodplain (1)	None or none apparent (12)
	Between stream/lake and other human us	e (1) X (Recovered (7)
	X Part of riparian or upland corridor (1)	Recent or no recovery (1)
	3c. Maximum water depth. Select only 1.	Check all disturbances observed
	>0.7 (27.6in) (3)	ditch point source (nonstormwater)
	X = 0.4 m (-15.7 m) (1)	
		stormwater input
40	Motric 4 Habitat Alteration and Developr	nont (may 20 nts)
49 13	An Substrate disturbance. Seem and or double shock	
Subtotal Points	4a. Substrate disturbance. Score one of double check	anu average.
	X Recovered (3)	4c. Habitat alteration. Score one or double check and average.
	Recovering (2)	None or none apparent (9)
	Recent or no recovery (1)	X Recovered (6)
		Recovering (3)
	4b. Habitat development. Select one.	Recent or no recovery (1)
	Excellent (7)	k all disturbances observed
	Very good (6)	
		ving Li shrub/sapling removal
		ung Linerbaceous/aquatic bed removal
		rcutting
		dy debris removal
		c pollutants
49 subtotal this p	age	

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Site: Calver	Cliffs Nuclear Power Plant	Date:	February 21, 2008	
Wetland:	WA-2	Rater:	H. Fogell, A. Davis	

•		subtotal f	first page
	59	10	M
Ì	Subtotal	Points	Ch

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Special Wetlands. (max 10 pts.)
at apply and score as indicated
Bog (10 pts)
Fen (10 pts)
Old Growth Forest (10 pts)
Mature forested wetland (5 pts)
Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
Lake Plain Sand Prairies (Oak Openings) (10 pts)
Relict Wet Prairies (10 pts)

Known occurrence state/federal threatened or endangered species (10)

- Significant migatory songbird/waterfowl habitat or usage (10 pts) х
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

72	1	13	1.0
Subtotal	P	oint	c

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

0

1

2

3

6a. Wetland Vegetation Communities Score ale

al	l pre	sent using 0 to 3 so
	0	Aquatic bed
E	0	Emergent
L	2	Shrub
	2	Forest
	0	Mudflats
	0	Open water
Ľ	0	Other (list)

6b. Horizontal (plan view) interspersion



6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage



6d. Microtopography

Score all present using 0 to 3 scale

- 0 Vegetated hummocks/tussocks
 - 3 Coarse woody debris >15 cm (6")
 - 0 Standing dead > 25 cm (10") dbh

2 Amphibian breeding pools

Narrative Description of Vegetation Quality

part and is of high quality

vegetation and is of high quality

Vegetation Community Cover Scale

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Absent or comprises <0.1 ha (0.2471 acres) contiguous area

vegetation and is of moderate quality, or comprises a

Present and either comprises significant part of wetland's

vegetation and is of moderate quality or comprises a small

Present and comprises significant part, or more, of wetland's

Present and either comprises small part of wetland's

significant part but is of low quality

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

2 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 3

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	Bac	kground Informa	tion Form	
Name:	H. Fogell, A. Davis		Date:	February 21, 2008
Affiliation:	MACTEC Engineeri	ng & Consulting		
User Address:	3301 Atlantic Ave, F	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-2			
Location of Weth including addres available	lands ss if See OR/	AM Figure in CCNPF	P Wetlands Master Pla	n/USACE IP Application
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.42448/-76.43513	}	Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	\checkmark
Hydrologic Unit C	ode	20600040403	NWI Map	✓
Wetland Size (ac	res)	0.3	OWI Map	
How was size es	stimated?		Aerial Photo	- -
			Soil Survey	I
			ODNR - DNAP	
	Wetlands Delineation/G	IS	Delineation Report/Map	V
Photograph				
final score:		Provisional Wetland	Category: Category 3	

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-2		

V NO	YES
✓ NO	YES
✓ NO	YES
	✓ YES
✓ NO	YES
NO N	YES
✓ NO	YES
NO NO	YES
	YES
✓ NO	YES
✓ NO	YES
√ NO	YES
	V YES
✓ NO	YES
⊡ NO	YES
⊡ NO	YES
	 ✓ NO

Table 2. Interim scoring breakpoints for wetland					
regulatory categories for ORAM 5.0 scores					
Category	ORAM 5.0 Score				
1	0-29.9				
1 or 2 gray zone	30-34.9				
modified 2	35-44.9				
2	45-59.9				
2 or 3	60-64.9				
3	65-100				

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72 Category 3

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Table based on FEB 2001 OEPA Standards



Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Wetlands:	WA-3		Rater:	H. Fogell, A. Davis
1 1 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2h	ax 6 pts) ha) (5 pts) (4 pts) pts) i) (2pts) 2ha) (1 pt)		
11 10 Subtotal Points	Metric 2. Upland buffers and surrege to the select on the select on the select on the select on the select of t	ounding land use. (r <u>re</u> , <u>do not double check)</u> (64ft) or more around wetlan n to <50m (82 to <164ft) ar Om to <25m (32ft to <82ft) ar age <10m (<32ft) around w <u>one or double check & ave</u> er forest, prairie, savannah rubland, young second gro ntial, fenced pasture, park, pasture, row cropping, mini	nax 14 pts) and perimeter (7) ound wetland perimeter (4) around wetland perimeter (vetland perimeter (0) <u>erage)</u> , wildlife area, etc. (7) with forest. (5) conservation tillage, new fa ng, construction. (1)	1) Illow field. (3)
32 21 Subtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) X Other groundwater (3) Precipitation (1) X Seasonal/Intermittent surface w Perennial surface water (lake or 3b. Connectivity. Score all that apply. 100 year floodplain (1) X Between stream/lake and other Y Part of wetland/upland (e.g. fore X Part of riparian or upland corrido 3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) X 0.4 to 0.7m (15.7 to 27.6in) (2) <0.4m (<15.7in) (1)	2 vater (3) r stream) (5) 5 human use (1) est), complex (1) or (1)		uration. heck & average) ently inundated/saturated (4) ted/saturated (3) ated (2) ated in upper 30cm (12in) (1) hydrologic regime. heck & average) parent (12) overy (1) tes observed point source (nonstormwater) filling/grading road bed/RR track dredning
44.5 12.5 Subtotal Points	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or dou None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	Check all disturba	Stormwater input Storm	other-list e one or double check and average. parent (9) overy (1) eapling removal eous/aquatic bed removal ntation lg g g t emrichment

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44.5 subtotal this page

Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Vetland:	WA-3		Rater:	H. Fogell, A. Davis
5 subtotal firs	st page			
44.5 0	Metric 5. Special Wetlands. (max 10 pt	ts.)		
ubtotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)	contricted budgelog	v (10 sto)	
		tricted hydrology (y (10 pis) 5 nte)	
	Lake Plain Sand Prairies (Oak Openin	as) (10 pts)	o p(3)	
	Relict Wet Prairies (10 pts)	ge) (10 p.c.)		
	Known occurrence state/federal threat	lened or endanger	ed species (10)	
	Significant migatory songbird/waterfow	/I habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rati	ng. (-10 pts)	
50.5 6	Metric 6. Plant Communities, interspe	rsion, microto	pography. (max 20 pts	5.)
Subtotal Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetation	n Community Cover Sc	ale
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	0 Emergent		Present and either comprises	s small part of wetland's
	0 Shrub	1	vegetation and is of mode	rate quality, or comprises a
	0 Forest		significant part but is of low	v quality
	0_Mudflats		Present and either comprises	significant part of wetland's
	0_Open water	2	vegetation and is of mode	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
	•	3	Present and comprises signifi	icant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion		vegetation and is of high q	
		Morrotivo	Departmention of Vagatati	on Quality
	High (5)	Nallative	Description of vegetati	
	Moderately high (4)	low	disturbance tolerant pative	Iominance of nonnative or
	A Moderate (3)			
	Low (1)		Native spp are dominant com	ponent of the vegetation,
	None (0)	moderate	can also be present and s	species diversity moderate to
			moderately high, but gene	rally w/o presence of rare
	6c. Coverage of invasive plants		threatened or endangered	spp
	Refer to Table 1 ORAM long form for list.		A prodominance of pative spe	
			and/or disturbance toleran	t native spp absent or virtually
	Add or deduct points for coverage	nign	absent, and high spp diver	rsity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp
	X Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat an	d Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	s)
	Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mor	e
	Score all present using 0 to 3 scale	•••		
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	2 Coarse woody debris >15 cm (6")	0	Absent	· · · · · · · · · · · · · · · · · · ·
	0 Standing dead > 25 cm (10") dbh	1	Present very small amounts o	or if more common
	3 Amphibian breeding pools		of marginal quality	
		2	Present in moderate amounts	s, but not of highest
			quality or in small amounts	or nighest quality
		3	Present in moderate or greate	er amounts
			and of nignest quality	

5 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

Background Information Form -- ORAM v.5.0

	Backg	round Informat	ion Form	·······
Name:	H. Fogell, A. Davis		Date:	February 21, 200
Affiliation:	MACTEC Engineering	& Consulting		
User Address:	3301 Atlantic Ave, Rale	eigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-3			
Location of Wetla including addres available	ands s if See ORAM	Figure in CCNPP	Wetlands Master P	lan/USACE IP Appli
			Sources of informatic used (check all that apply)	n Sector Sector
Lat/Lon or UTM	38.42573/-76.43598		Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	7
Hydrologic Unit Co	ode	20600040403	NWI Map	7
Wetland Size (acr	es)	0.42	OWI Map	
How was size es	timated?		Aerial Photo	I
			Soil Survey	✓
			ODNR - DNAP	
	Wetlands Delineation/GIS		Delineation	
			Report/Map	✓
Photograph				·····
final score:	50.5	Provisional Wetland C	ategon/: Categon	2

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ORAM v.5.0 Field Form - Narrative Rating

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Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-3		

1: Critical Habitat	⊡ NO	🗌 YES
2: Threatened or Endangered Species	⊡ NO	S YES
3: Documented High Quality Wetland	✓ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES
6: Bogs	⊡ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands		TES YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	TES YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	⊡ NO	YES
9d: Native Species Predominate	√ NO	YES
9e: Non-native Species Predominate	NO NO	✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland				
regulatory categori	es for URAINI 5.0 scores			
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			

50.5 Category 2

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Table based on FEB 2001 OEPA Standards

Sita: Calvart C	Tiffe Nuclear Power Plant		Date:	February 21, 2008
Metlando	Mis Nuclear Fower Flait		Bater:	H Fogell A Davis
vetiands:	VVA-4 North			The Togen, A. Davis
<u>1</u>	Metric 1. Wetland Area (size). (ma	ix 6 pts)		
Subtotal Points	Select one size class and assign score.			
	25 to <50 acres (10.1 to <20.2h	a) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 p	ots)		
	0.3 to <3 acres (0.12 to <1.2ha)	(2pts)		
	X 0.1 to <0.3 acres (0.04 to <0.12)	na) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)			
14 13	Metric 2. Upland buffers and surro	ounding land use. (max 14 pts)	
Subtotal Points	2a. Calculate average buffer width (select on	e, do not double check)	• /	
	X WIDE. Buffers average 50m (10	64ft) or more around wetle	and perimeter (7)	
	MEDIUM. Buffers average 25m	to <50m (82 to <164ft) a	round wetland perimeter (4)
	NARROW. Buffers average 10	n to <25m (32ft to <82ft)	around wetland perimete	r (1)
	VERY NARROW. Buffers avera	ige <10m (<32ft) around v	wetland perimeter (0)	
	2b. Intensity of surrounding land use (select o	one or double check & av	erage)	
	X VERY LOW. 2nd growth or olde	er forest, prairie, savannal	h, wildlife area, etc. (7)	
	X LOW. Old field (>10 years), shr	ubland, young second gro	owth forest. (5)	
	MODERATELY HIGH. Residen	tial, fenced pasture, park,	, conservation tillage, new	fallow field. (3)
	HIGH. Urban, industrial, open p	asture, row cropping, min	ling, construction. (1)	
29 15	Metric 3, Hydrology, (max 30 pts)		3d. Duration inundation/si	aturation.
Subtotal Points	3a Sources of Water. Score all that apply.		(select one or double	check & average)
	High pH groundwater (5)		X Semi- to perma	anently inundated/saturated (4)
	Other groundwater (3)		Regularly inund	dated/saturated (3)
	X Precipitation (1)		Seasonally inur	ndated (2)
	X Seasonal/Intermittent surface wa	ater (3)	Seasonally sat	urated in upper 30cm (12in) (1)
	Perennial surface water (lake or	stream) (5)	2. Madifications to patur	al hydrologic maimo
	3b Connectivity Score all that apply		se. woullcauons to nature (select one or double	check & average)
	100 year floodplain (1)		None or none	apparent (12)
	X Between stream/lake and other	human use (1)	Recovered (7)	
	X Part of wetland/upland (e.g. fore	st), complex (1)	X Recovering (3)	
	X Part of riparian or upland corrido	r (1)	Recent or no r	ecovery (1)
	3c Maximum water depth Select only 1	Г	Check all disturbar	nces observed
	>0.7 (27.6in) (3)	1	🗹 ditch	point source (nonstormwater)
	0,4 to 0.7m (15.7 to 27.6in) (2)		🗹 dike 🔤	김 filling/grading
	X_<0.4m (<15.7in) (1)		🗌 tile 🛛	road bed/RR track
			Liweir L	 ∠ dredging
			stormwater input	otherlist
37 8	Metric 4. Habitat Alteration and D	evelopment. (max)	20 pts.)	
Subtotal Points	4a. Substrate disturbance. Score one or dou	ıble check and average.		
	None or none apparent (4)			
	Recovered (3)		4c. Habitat alteration. Sco	pre one or double check and average.
	X Recovering (2)		None or none	apparent (9)
	Recent or no recovery (1)		Recovered (6)	
			X Recovering (3)	
	4b. Habitat development. Select one.		Recent or no re	ecovery (1)
	Excellent (7)	Check all disturba	ances observed	·
	Very good (6)			
			L shrut	o/sapiing removal
	Moderately good (4)	grazing	L herba	aceous/aquatic bed removal
		Clearcutting	L sedir	nencation
	Poor (1)		ural area	
		woody debris remo		uiy
		toxic pollutants		entemnonment

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ite: Calvert C	liffs Nuclear Power Plant		Date:	February 21, 2008
etland:	WA-4 North		Rater:	H. Fogell, A. Davis
ر subtotal first	page			
37 0	Metric 5. Special Wetlands. (max 10 p	ts.)		
ototal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Mature forested wetland (5 pts)			
	l ake Erie coastal/tributary wetland-up	restricted bydrolog	10 pts)	
	l ake Erie coastal/tributary wetland-res	stricted hydrology	(5 pts)	
	I ake Plain Sand Prairies (Oak Openin	as) (10 pts)	(0 p.0)	
	Relict Wet Prairies (10 pts)	347 (14 14 14 14		
	Known occurrence state/federal threat	tened or endange	red species (10)	
	Significant migatory songbird/waterfow	vl habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rati	ing. (-10 pts)	
4 7	Metric 6. Plant Communities, interspe	rsion, microto	opography. (max 20 pts	s.)
total Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sc	ale
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	0 Emergent		Present and either comprises	small part of wetland's
	0 Shrub	1	vegetation and is of mode	rate quality, or comprises a
	0 Forest		significant part but is of lov	v quality
	0 Mudfiats		Present and either comprises	s significant part of wetland's
	0 Open water	2	vegetation and is of mode.	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
		3	Present and comprises signification and is of bigh of	icant part, or more, of wetland's
	6b. Honzontal (plan view) interspersion	L		
	Select only one	Narrative	Description of Vegetati	on Quality
	Moderately high (4)		I ow snn diversity and/or nred	lominance of poppative or
	Moderate (3)	low	disturbance tolerant native	e species
	Moderately low (2)		Notive and are deminent as	popport of the vegetation
	X Low (1)		although nonnative and/or	disturbance tolerant native spp
	None (0)	moderate	can also be present, and s	species diversity moderate to
			moderately high, but gene	rally w/o presence of rare
	6c. Coverage of invasive plants.	1	threatened or endangered	spp
	Refer to Table 1 ORAM long form for list.		A predominance of native spe	ecies, with nonnative spp
		high	and/or disturbance toleran	t native spp absent or virtually
	Add or deduct points for coverage	ngn	absent, and high spp diver	rsity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp
	Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	\$)
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	<u>6d. Microtopography</u>	3	Fign 4 na (9.88 acres) or mor	e
	Score all present using 0 to 3 scale	Microtopo	aranhy Cover Scale	
		Microtopo	Aboant	
	2 Coarse woody deprise is cm (6")			- ¥
	3 Amphibian breeding pools	1	of marginal quality	or il more common
				but not of highest
		2	quality or in small amounts	s of highest quality
		_	Present in moderate or croate	ar amounts

GRAND TOTAL (max 100 pts)

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Background Information Form - ORAM v.5.0

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	Ba	ckground Information	tion Form	
Name:	H. Fogell, A. Davis	<u> </u>	Date:	February 21, 2008
Affiliation:	MACTEC Enginee	ering & Consulting		
User Address:	3301 Atlantic Ave,	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-4 North			
Location of Wetla including addres available	ands s if See OF	RAM Figure in CCNPP	Wetlands Master	Plan/USACE IP Application
			Sources of informat used (check all that apply	ion ()
Lat/Lon or UTM	38.42671/-76.4333	35	Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit Co	ode	20600040403	NWI Map	
Wetland Size (acro	es)	0.16	OWI_Map	
How was size est	timated?		Aerial Photo	<u> </u>
			Soil Survey	<u> </u>
	Matlende Delinestien/		ODNR - DNAP	
	Wetlands Delineation/	GIS	Delineation	
			Report/Map	
Photograph	<u></u>			<u></u>
final score:	44	Provisional Wetland C	ategory: modified	d 2

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-4 North		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species		YES
3: Documented High Quality Wetland	NO NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)		YES
6: Bogs	✓ NO	TES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	⊡ NO	YES
8b: Mature Forested Wetlands		S YES
9a: Lake Erie Coastal and Tributary Wetlands	NO 🔽	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	T YES
9c: Hydrology unrestricted		YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate	✓ NO	YES
10: Oak Openings		YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland				
regulatory categori	es for ORAM 5.0 scores			
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			
44 modified	2			

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Table based on FEB 2001 OEPA Standards

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ite. Caivert Cil		
Vetlands:	WA-4 South	Rater: H. Fogell, A. Davis
2 2	Metric 1. Wetland Area (size). (max 6 pts)	
ubtotal Points	Select one size class and assign score.	
	>50 acres (>20.2ha) (6 pts)	
	25 to <50 acres (10.1 to <20.2na) (5 pts)	
	10 to <25 acres (4 to <10, ina) (4 pis) (2 to <10, acres (1, 2 to <4 bo) (3, pts)	
	x = 0.3 to <3 acres (0.12 to <1.2ha) (3 pts)	
	1 to < 0.3 acres (0.04 to < 0.12 ha) (1.01)	
	< 1 to 30.0 doise doise (0.04 ho 100 horizon) (1 ps)	
4	Matria 2. Unland buffers and surrounding lar	nd use (max 14 nts)
II 9 Subtotal Points	2a. Calculate average buffer width (select one, do not doub	le check)
	WIDE, Buffers average 50m (164ft) or more a	round wetland perimeter (7)
	X MEDIUM, Buffers average 25m to <50m (82 t	o <164ft) around wetland perimeter (4)
	NARROW, Buffers average 10m to <25m (32	2ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<32	Rt) around wetland perimeter (0)
	2b. Intensity of surrounding land use (select one or double of	check & average)
	VERY LOW. 2nd growth or older forest, prairie	e, savannah, wildlife area, etc. (7)
	X LOW. Old field (>10 years), shrubland, young	second growth forest. (5)
	MODERATELY HIGH. Residential, fenced pa	sture, park, conservation tillage, new fallow field. (3)
	HIGH. Urban, industrial, open pasture, row cro	opping, mining, construction. (1)
29 18	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/saturation.
Subtotal Points	3a. Sources of Water. Score all that apply.	(select one or double check & average)
	High pH groundwater (5)	X Semi- to permanently inundated/saturated (4)
	Other groundwater (3)	Regularly inundated/saturated (3)
	X Precipitation (1)	Seasonally inundated (2)
	Seasonai/Intermittent surface water (3)	Seasonally saturated in upper 30cm (12in) (1)
	X Perennial surface water (lake or stream) (5)	1. Martinetices to actual hydrologic regime
		3e. Modifications to natural hydrologic regime.
	3b. Connectivity. Score all that apply.	None or none annarent (12)
	100 year noouplain (1)	X Recovered (7)
	X Part of wetland/upland (e.g. forest), complex (1	1) X Recovering (3)
	Part of riparian or upland corridor (1)	Recent or no recovery (1)
	20 Movimum water depth Select only 1	Check all disturbances observed
	>0 7 (27 6in) (3)	ditch 🔽 point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)	✓ dike ✓ filling/grading
	X <0.4m (<15.7in) (1)	tile / road bed/RR track
		weir dredging
		Stormwater input other- list
39 10	Metric 4. Habitat Alteration and Developmer	nt. (max 20 pts.)
ubtotal Points	4a. Substrate disturbance. Score one or double check and	d average.
	None or none apparent (4)	
	X Recovered (3)	4c. Habitat alteration. Score one or double check and average.
	X Recovering (2)	None or none apparent (9)
	Recent or no recovery (1)	X Recovered (6)
		X Recovering (3)
	4b. Habitat development. Select one.	Recent or no recovery (1)
	Excellent (7)	Il disturbances observed
	Very good (6) Check a	
	Good (5)	shrub/sapling removal
	Moderately good (4)	herbaceous/aquatic bed removal
	X Fair (3)	tting sedimentation
	Poor to fair (2)	e cutting 🛛 🗹 dredging
	Poor (1)	debris removal 🔲 farming
		Nutrient emrichment

Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Netland:	WA-4 South		Rater:	H. Fogell, A. Davis
	it page			
39 0	Metric 5. Special Wetlands. (max 10 pt	5.)		
ubtotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)		(1 - 1)	
		estricted hydrolog	Jy (10 pts)	
	Lake Erie coastal/tributary wetland-rest	ncted nydrology	(o pis)	
	Relict Wet Prairies (10 nts)	(i) pis)		
	Known accurrence state/federal threats	aned or endance	red energies (10)	
	Significant migatory songbird/waterfow	habitat or usage	(10 pts)	
	Category 1 Wetland See Question 1 c	of Qualitative Rat	(
52 13	Metric 6, Plant Communities, intersper	sion, microte	opography. (max 20 pts	.)
btotal Points	6a. Wetland Vegetation Communities	-		
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sc	ale
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	0 Emergent		Present and either comprises	small part of wetland's
	1 Shrub	1	vegetation and is of moder	rate quality, or comprises a
	2 Forest		significant part but is of low	v quality
	0 Mudflats		Present and either comprises	significant part of wetland's
	0 Open water	2	vegetation and is of mode	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
		3	Present and comprises signifi	cant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion		vegetation and is of high q	
	Select only one	Nerretive	Description of Verstati	en Quelita
	High (5)	Narrative	Description of vegetati	
	Moderately high (4)	low	Low spp diversity and/or pred	ominance of nonnative or
	Moderate (3)			
			Native spp are dominant com	ponent of the vegetation,
	Low (1)	moderate	aithough nonnative and/or can also be present and s	disturbance tolerant native spp
		moderate	moderately high, but gener	rally w/o presence of rare
	6c. Coverage of invasive plants		threatened or endangered	spp
	Refer to Table 1 ORAM long form for list.		A predominance of pative spe	cies with poppetive spp
		1	and/or disturbance tolerant	t native spp absent or virtually
	Add or deduct points for coverage	nign	absent, and high spp diver	sity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threa	tened, or endangered spp
	Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	s)
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	<u>6d. Microtopography</u>	3	High 4 ha (9.88 acres) or mor	e
	Score all present using 0 to 3 scale			
		wicrotopo	grapny Cover Scale	
	2 Vegetated hummocks/tussocks		Absent	
	2 Vegetated hummocks/tussocks 2 Coarse woody debris >15 cm (6")	0		
	 2 Vegetated hummocks/tussocks 2 Coarse woody debris >15 cm (6") 0 Standing dead > 25 cm (10") dbh 3 Amphibian breeding pools 	1	Present very small amounts o of marginal quality	r if more common
	 2 Vegetated hummocks/tussocks 2 Coarse woody debris >15 cm (6") 0 Standing dead > 25 cm (10") dbh 3 Amphibian breeding pools 	0 1 2	Present very small amounts o of marginal quality Present in moderate amounts quality or in small amounts	n if more common , but not of highest of highest quality
	 2 Vegetated hummocks/tussocks 2 Coarse woody debris >15 cm (6") 0 Standing dead > 25 cm (10") dbh 3 Amphibian breeding pools 	0 1 2	Present very small amounts o of marginal quality Present in moderate amounts quality or in small amounts Present in moderate or greate	or if more common , but not of highest of highest quality er amounts

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GRAND TOTAL (max 100 pts)

Background Information Form - ORAM v.5.0

Newses	H Eggoll A Davis	ground month	Date:	February 21, 200
Name:	MACTEC Engineerin	a & Consulting		1 00/00/j 21, 200
Annation.		g a concarang		
User Address:	3301 Atlantic Ave, Ra	aleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-4 South			
Location of Wetla including addres available	ands is if See ORA	M Figure in CCNPP	Wetlands Master Pl	an/USACE IP Applic
			Sources of informatio	n
			(check all that apply)	
Lat/Lon or UTM	38.42603/-76.43367		Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit Co	ode	20600040403	NWI Map	
Wetland Size (acr	res)	0.6	OWI Map	
How was size es	timated?		Aerial Photo	
			Soil Survey	✓
	Matlanda Dolinaation/GI		ODNR - DNAP	
	Wettands Defineation/Git	5	Delineation	
			Report/Map	
Photograph	Mana - Mara - Mara			

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions Name: H. Fogell, A. Davis Date: February 21, 2008 Wetlands Name WA-4 South

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species		YES
3: Documented High Quality Wetland		YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	Tes
6: Bogs	✓ NO	S YES
7: Fens	✓ NO	TES
8a: "Old Growth Forest"	NO N	YES
8b: Mature Forested Wetlands	✓ NO	Sec. 1997
9a: Lake Erie Coastal and Tributary Wetlands	V NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)		YES
9c: Hydrology unrestricted	NO 🔽	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate	🗹 NO	YES
10: Oak Openings	⊡ NO	T YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland			
regulatory categories for ORAM 5.0 scores			
Category	ORAM 5.0 Score		
1	0-29.9		
1 or 2 gray zone	30-34.9		
modified 2	35-44.9		
2	45-59.9		
2 or 3	60-64.9		
3	65-100		
52 Category	2		

Table based on FEB 2001 OEPA Standards

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ite: Calvert (Cliffs Nuclear Power Plant	Date:	February 21, 2008	
etlands:	WA-5	Rater:	H. Fogell, A. Davis	
2 2	Metric 1. Wetland Area (size). (max 6 pts)			
ubtotal Points	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts)			
	25 to <50 acres (10.1 to <20.2ha) (5 pts)			
	10 to <25 acres (4 to <10.1 na) (4 pts)			
	$3 \text{ to < 10 acres (1.2 \text{ to < 4 na) (3 pis)}}$			
	\times 0.5 to 5 acres (0.12 to 51.2ha) (2pts)			
	0.1 to <0.3 acres (0.04 to <0.121a) (1 pt)			
16 14	Metric 2. Upland buffers and surrounding land us	se. (max 14 pts)		
ubtotal Points	2a. Calculate average buffer width (select one, do not double che	<u>ck)</u>		
	X WIDE. Buffers average 50m (164ft) or more around	wetland perimeter (7)		
	MEDIUM, Buffers average 25m to <50m (82 to <164	4ft) around wetland perimeter (4)	
	NARROW, Buffers average 10m to <25m (32ft to <	82ft) around wetland perimeter	(1)	
	VERY NARROW. Buffers average <10m (<32ft) aro	ound wetland perimeter (0)		
		0		
	2b. Intensity of surrounding land use (select one of double check	<u>& average)</u>		
	X VERY LOW. 2nd growth or older forest, praine, sava	arman, wildlife area, etc. (7)		
	MODERATELY HIGH Residential fenced nasture	nark conservation tillage new f	allow field (3)	
	HIGH, Urban, industrial, open pasture, row cropping	, mining, construction, (1)	()	
36 20	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/sat	uration.	
ubtotal Points	3a. Sources of Water. Score all that apply.	(select one or double of	check & average)	
	High pH groundwater (5)	X Semi- to perman	ently inundated/saturated (4)	
	X Other groundwater (3)	Regularly inunda	ted/saturated (3)	
	X Precipitation (1)	Seasonally inundated (2)		
	X Seasonal/Intermittent surface water (3)	Seasonally satur	ated in upper 30cm (12in) (1)	
	Perennial surface water (lake or stream) (5)			
		3e. Modifications to natural	hydrologic regime.	
	3b. Connectivity. Score all that apply.	(select one or double of	check & average)	
	Between streem/lake and other human use (1)		pparent (12)	
	Between stream/nake and other human use (1)	Recovering (3)		
	X Part of riparian or unland corridor (1)	Recent or no rec	covery (1)	
	3c. Maximum water depth. Select only 1.	Check all disturbance	ces observed	
	>0.7 (27.6in) (3)	ditch	point source (nonstormwater)	
	0.4 to 0.7m (15.7 to 27.6in) (2)	🛄 dike	filling/grading	
	X <0.4m (<15.7in) (1)	📃 tile	road bed/RR track	
		weir	dredging	
		stormwater input	other- list	

toxic pollutants

Metric 4. Habitat Alteration and Development. (max 20 pts.) 13 Subtotal Points 4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Х Recovered (3) Recovering (2) Recent or no recovery (1)

4b. Habitat development. Select one.

Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)



49 subtotal this page

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			Date.	Tebluary 21, 2000		
/etland:	WA-5		Rater:	H. Fogell, A. Davis		
3 subtotal first	page					
49 0	Metric 5. Special Wetlands. (max 10 pt	s.)				
btotal Points	Check all that apply and score as indicated					
	Bog (10 pts)					
	Fen (10 pts)					
	Old Growth Forest (10 pts)					
	Mature forested wetland (5 pts)					
	Lake Erie coastal/tributary wetland-unr	estricted hydrolog	y (10 pts)			
	Lake Erie coastal/tributary wetland-res	tricted hydrology	(5 pts)			
	Lake Plain Sand Prairies (Oak Opening	Lake Plain Sand Prairies (Oak Openings) (10 pts) Relict Wet Prairies (10 pts)				
	Relict Wet Prairies (10 pts)					
	Known occurrence state/federal threat	ened or endange	red species (10)			
	Significant migatory songbird/waterfow	I habitat or usage	(10 pts)			
	Category 1 Wetland. See Question 1	of Qualitative Rati	ng. (-10 pts)			
21 40	Matria 6 Diant Communities interspor	sion mierot	nography (may 20 ptc	• •		
	Metric 6. Flam Communities, mersper	sion, microu	phographily. (max zo pos)		
notal Points	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sc	ale		
		0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area		
			Present and either comprises	small part of wetland's		
	2 Shrub	1	vegetation and is of mode	rate quality, or comprises a		
	1 Forest		significant part but is of lov	v quality		
	0 Mudflats		Present and either comprises	significant part of wetland's		
	0 Open water	2	vegetation and is of mode	rate quality or comprises a small		
	0 Other (list)		part and is of high quality			
		3	Present and comprises signifi	icant part, or more, of wetland's		
	6b. Horizontal (plan view) interspersion		vegetation and is of high q	uality		
	Select only one			•		
	High (5)	Narrative	Description of Vegetati	on Quality		
	Moderately high (4)	low	Low spp diversity and/or pred	lominance of nonnative or		
	X Moderate (3)		disturbance tolerant native			
	Moderately low (2)		Native spp are dominant com	ponent of the vegetation,		
		moderate	although nonnative and/or	disturbance tolerant native spp		
	ivone (0)	Inioderate	moderately high, but gene	rally w/o presence of rare		
	6c. Coverage of invasive plants		threatened or endangered	spp		
	Refer to Table 1 ORAM long form for list.					
			and/or disturbance toleran	t native spp absent or virtually		
	Add or deduct points for coverage	high	absent, and high spp diver	rsity and often, but not always,		
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp		
	Moderate 25-75% cover (-3)	L				
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Q	uality		
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	3)		
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)		
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)		
	6d. Microtopography	3	High 4 ha (9.88 acres) or mor	e		
	Score all present using 0 to 3 scale					
	2 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale			
	1 Coarse woody debris >15 cm (6")	0	Absent			
	0 Standing dead > 25 cm (10") dbh	1	Present very small amounts of	or if more common		
-	2 Amphibian breeding pools		of marginal quality			
		2	Present in moderate amounts	, but not of highest		
		L	quality or in small amounts	or nignest quality		

GRAND TOTAL (max 100 pts)

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Provisional Wetland Category:

Category 2 or 3

Background Information Form - ORAM v.5.0

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	Bad	kground Informa	tion Form	
Name:	H. Fogell, A. Davis		Date:	February 21, 2008
Affiliation:	MACTEC Engineer	ring & Consulting		
User Address:	3301 Atlantic Ave,	Raleigh, NC.		
Phone:	919-876-0416	·····		
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-5			
Location of Wetla including addres available	ands s if See OF	AM Figure in CCNPP	Wetlands Master Pla	an/USACE IP Application
			Sources of informatior used (check all that apply)	
Lat/Lon or UTM	38.42157/-76.4364	3	Site Visit	V
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit Co	ode	20600060706	NWI Map	
Wetland Size (acr	es)	0.32	OWI Map	
How was size es	timated?		Aerial Photo	
			Soil Survey	<u> </u>
		210	ODNR - DNAP	
	Wetlands Delineation/	315	Delineation Report/Map	
Photograph				<u></u>
final score:	61	Provisional Wetland	Category: Category	2 or 3

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-5		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland		YES
4: Significant Breeding or Concentration Area (waterfowl)		☐ YES
5: Category 1 Wetlands (hydrologically isolated)		YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands		YES
9a: Lake Erie Coastal and Tributary Wetlands		YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)		YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate	✓ NO	YES
10: Oak Openings	⊡ NO	YES
11: Relict Wet Prairies	✓ NO	YES
regulatory categories for ORAM 5.0 scores		
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Category	ORAM 5.0 Score	
1	0-29.9	
1 or 2 gray zone	30-34.9	
modified 2	35-44.9	
2	45-59.9	
2 or 3	60-64.9	
3	65-100	

Table based on FEB 2001 OEPA Standards

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ORAM v. 5.0 Field Form Quantitative Rating

		Date.	
ands:	WA-6		H. Fogell, A. Davis
0	Metric 1. Wetland Area (size). (max 6 pts)		
Points	Select one size class and assign score.		
	25 to <50 acres (10.1 to <20.2ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
	X_<0.1 acres (0.04ha) (0 pts)		
14	Metric 2. Upland buffers and surrounding land us	se. (max 14 pts)	
Points	2a. Calculate average buffer width (select one, do not double che	eck)	
	X WIDE. Buffers average 50m (164ft) or more around	l wetland perimeter (7)	
	MEDIUM. Buffers average 25m to <50m (82 to <16	4ft) around wetland perimeter (4)	
	NARROW. Buffers average 10m to <25m (32ft to	<82ft) around wetland perimeter (1)	
	VERY NARROW. Buffers average <10m (<32ft) are	ound wetland perimeter (0)	
	2b. Intensity of surrounding land use (select one or double check	& average)	
	X VERY LOW. 2nd growth or older forest, prairie, sav	annah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shrubland, young second	nd growth forest. (5)	wfold (2)
	HIGH. Urban, industrial, open pasture, row cropping	g, mining, construction. (1)	w (ieid. (5)
20	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/satura	ntion.
Points	3a. Sources of Water. Score all that apply.	(select one or double che	ck & average)
	High pH groundwater (5)	Regularly inundated	ty mundated/saturated (4)
	X Precipitation (1)	Seasonally inundated	ed (2)
	X Seasonal/Intermittent surface water (3)	Seasonally saturate	ed in upper 30cm (12in) (1)
	Perennial surface water (lake or stream) (5)		
		3e. Modifications to natural hy	drologic regime.
	3b. Connectivity. Score all that apply.	(select one or double che	ck & average)
	Retween stream/ake and other human use (1)	X Recovered (7)	arent (12)
	Part of wetland/upland (e.g. forest), complex (1)	Recovering (3)	
	X Part of riparian or upland corridor (1)	Recent or no recov	very (1)
	3c. Maximum water depth. Select only 1.	Check all disturbance	s observed
	>0.7 (27.6in) (3)	ditch po	pint source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)	dike 🗌 fil	ling/grading
	X <0.4m (<15.7in) (1)	l L tile	ad bed/RR track
			edging
		stormwater input o	ther-list
13	Metric 4. Habitat Alteration and Development. (n	nax 20 pts.)	
Points	4a. Substrate disturbance. Score one or double check and aver	age.	
	X Recovered (3)	4c. Habitat alteration. Score r	one or double check and average
	Recovering (2)	None or none appr	arent (9)
	Recent or no recovery (1)	X Recovered (6)	
		Recovering (3)	
	4b. Habitat development. Select one.	Recent or no recov	ery (1)
	Excellent (7)		
	Very good (6) Check all dis	turbances observed	
	Good (5) mowing	🔲 shrub/sar	oling removal
	X Moderately good (4) grazing	herbaceo	us/aquatic bed removal
	Fair (3)	sediment	ation
	Poor to fair (2)	ng 🗌 dredging	
	Poor (1)	removal 🗌 farming	
	toxic pollutari	ts 🗌 nutrient e	emrichment
			·······
which a lable	P342		

Site: Calvert Cl	iffs Nuclear Power Plant		Date:	February 21, 2008
Wetland:	WA-6		Rater:	H. Fogell, A. Davis
subtotal first	page			
47 0	Metric 5. Special Wetlands. (max 10 pts	i.)		
Subtotal Points	Check all that apply and score as indicated Bog (10 pts) Fen (10 pts) Old Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-unre Lake Erie coastal/tributary wetland-restr Lake Plain Sand Prairies (Oak Openings) Relict Wet Prairies (10 pts)	stricted hydrolog icted hydrology s) (10 pts)	yy (10 pts) (5 pts)	
	Known occurrence state/federal threate Significant migatory songbird/waterfowl Category 1 Wetland, See Question 1 of	ned or endange habitat or usage f Qualitative Rati	red species (10) (10 pts) ng. (-10 pts)	
56 9 Subtotal Points	Metric 6. Plant Communities, interspers	sion, microto	ppography. (max 20 pts	.)
	Score all present using 0 to 3 scale	vegetatio	Absent or comprises <0.1 ha	
	0 Emergent 1 Shrub 1 Forest	1	Present and either comprises vegetation and is of moder significant part but is of low	small part of wetland's rate quality, or comprises a v quality
,	0 Mudflats 0 Open water 0 Other (list)	2	Present and either comprises vegetation and is of moder part and is of high quality	significant part of wetland's rate quality or comprises a small
	<u>6b. Horizontal (plan view) interspersion</u>	3	Present and comprises signifi vegetation and is of high q	icant part, or more, of wetland's uality
	High (5)	Narrative	Description of Vegetati	on Quality
<i>V</i>	Moderately high (4) Moderate (3)	low	Low spp diversity and/or pred disturbance tolerant native	ominance of nonnative or species
	Moderately low (2) X Low (1) None (0) 6c. Coverage of invasive plants.	moderate	Native spp are dominant com although nonnative and/or can also be present, and s moderately high, but gener threatened or endangered	ponent of the vegetation, disturbance tolerant native spp pecies diversity moderate to rally w/o presence of rare spp
	Refer to Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75 % cover (-5)	high	A predominance of native spe and/or disturbance tolerand absent, and high spp diver the presence of rare, threa	ecies, with nonnative spp t native spp absent or virtually sity and often, but not always, tened, or endangered spp
	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	;)
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
	6d Marshan arashu	2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography Score all process using 0 to 3 scole	3	High 4 ha (9.88 acres) or mor	e
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	2 Coarse woody debris >15 cm (6")	0	Absent	
	0 Standing dead > 25 cm (10") dbh 2 Amphibian breeding pools	1	Present very small amounts o of marginal quality	or if more common
		2	Present in moderate amounts quality or in small amounts	, but not of highest of highest quality
		3	Present in moderate or greate and of highest quality	er amounts

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GRAND TOTAL (max 100 pts)

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Provisional Wetland Category: Category:

Category 2

Background Information Form - ORAM v.5.0

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	Bac	kground Informat	ion Form	
Name:	H. Fogell, A. Davis		Date:	February 21, 2008
Affiliation:	MACTEC Engineer	ing & Consulting		
User Address:	3301 Atlantic Ave, I	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-6			
Location of Wetla including addres available	ands s if See OR	AM Figure in CCNPP	Wetlands Master Pl	an/USACE IP Applic
			Sources of informatio used (check all that apply)	n
Lat/Lon or UTM	38.42040/-76.4381	1	Site Visit	v
USGS Quad	Cove Point, MD		USGS Topo	I
Hydrologic Unit Co	ode	20600060706	NWI Map	v
Wetland Size (acr	es)	0.08	OWI Map	
How was size es	timated?		Aerial Photo	✓
			Soil Survey	✓
			ODNR - DNAP	
	Wetlands Delineation/	GIS	Delineation	
			Report/Map	\checkmark
Photograph			· · ·	
		Devisional Walland	Category Category	

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-6		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	NO 🗹	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES
6: Bogs		YES
7: Fens	√ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands	✓ NO	YES
9a: Lake Erie Coastal and Tributary Wetlands		YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate	✓ NO	YES
10: Oak Openings	✓ NO	T YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland				
regulatory categories for ORAM 5.0 scores				
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			
56 Category	2			

Table based on FEB 2001 OEPA Standards

: Calvert C	liffs Nuclear Power Plant	Date:	February 21, 2008
tlands:	WA-7	Rater:	H. Fogell, A. Davis
2	Metric 1, Wetland Area (size), (max 6 pts)		
otal Points	Select one size class and assign score.		
	>50 acres (>20.2ha) (6 pts)		
	25 to <50 acres (10.1 to <20.2ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	X = 0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	0, 1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
ঠ া4	Metric 2. Upland buffers and surrounding land u	ise. (max 14 pts)	
otal Points	2a. Calculate average buffer width (select one, do not double che	eck)	
	X WIDE. Buffers average 50m (164ft) or more around	d wetland perimeter (7)	
	MEDIUM. Buffers average 25m to <50m (82 to <16	64ft) around wetland perimeter (4)	
	NARROW. Buffers average 10m to <25m (32ft to	<82ft) around wetland perimeter (1)
	LIVERY NARROW. Butters average <10m (<32ft) ar	round wettand perimeter (0)	
	2b. Intensity of surrounding land use (select one or double check	<u>k & average)</u>	
	X VERY LOW. 2nd growth or older forest, prairie, sav	vannah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shrubland, young seco	ond growth forest. (5)	
	MODERATELY HIGH. Residential, fenced pasture,	 park, conservation tillage, new fa mining, construction, (1) 	niow field. (3)
	LIHIGH. Urban, industrial, open pasture, row cropping	ig, mining, construction. (1)	
23	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/satu	iration.
otal Points	3a. Sources of Water. Score all that apply.	(select one or double c	heck & average)
	High pH groundwater (5)	X Semi- to permane	ently inundated/saturated (4)
	X Other groundwater (3)	Regularly inundat	ed/saturated (3)
	X Precipitation (1)	Seasonally inund	ated (2)
	Seasonal/Intermittent surface water (3)	Seasonally satura	ated in upper 30cm (12in) (1)
	X Perennial surface water (lake or stream) (5)		
		3e. Modifications to natural	hydrologic regime.
	3b. Connectivity. Score all that apply.	(select one or double cl	heck & average)
	100 year floodplain (1) Between stream/lake and other human use (1)	X Recovered (7)	parent (12)
	Part of wetland/upland (e.g. forest), complex (1)	Recovering (3)	
	X Part of riparian or upland corridor (1)	Recent or no rec	overy (1)
	3c. Maximum water depth. Select only 1.		es observed
	>0.7 (27.6m) (3)		point source (nonstormwater)
	\times 0.4 to 0.7 m (15.7 to 27.6 m) (2)		filling/grading
			road bed/RR track
		stormwater input	other-list
19	Metric 4. Habitat Alteration and Development. (r	max 20 pts.)	
tal Points	4a. Substrate disturbance. Score one or double check and aver	rage.	
	X None or none apparent (4)		
	Recovered (3)	4c. Habitat alteration. Score	one or double check and average.
	Recovering (2)	X None or none ap	parent (9)
	Recent or no recovery (1)	Recovered (6)	
	the Unbited development Salastan	Recovering (3)	Nucry (1)
	4b. Habitat development. Select one.	Recent or no reco	overy (1)
	Excellent (/) Check all dis	sturbances observed	
		C chrysh (a	anling removal
	Moderately good (4)		
			etation
		i sedime	IRAUUII
	Poor to fair (2)		
	Poor to fair (2)	ing dredgin	g
	Poor (1)	ting dredgin s removal farming	g J

ORAM v. 5.0 Field Form Qu	Jantitative Rating	<u></u>	Date:	February 21, 2008
Wetland		<u></u>	Rater:	H Fogell A Davis
wetianti.				
o subtotal firs	t page			
63 5	Metric 5. Special Wetlands. (max 10 pt	s.)		
Subtotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	X Mature forested wetland (5 pts)			
	Lake Erie coastal/tnbutary wetland-unr	estricted hydrolog	gy (10 pts)	
	Lake Erie coastal/tributary wetland-rest		(5 pts)	
	Delict Wet Prairies (10 pts)	gs) (To pis)		
	Known occurrence state/federal threat	ened or endance	red species (10)	
	Significant migatory songbird/waterfow	I habitat or usage	e (10 pts)	
	Category 1 Wetland. See Question 1 of	of Qualitative Rat	ing. (-10 pts)	
81 18	Metric 6. Plant Communities, intersper	rsion, microt	opography. (max 20 pts	5.)
Subtotal Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover So	ale
	2 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	0 Emergent		Present and either comprises	s small part of wetland's
	0 Shrub		significant part but is of low	rate quality, or comprises a w quality
	2 Forest		Based and an	
		2	venetation and is of mode	s significant part of wetland's prate quality or comprises a small
	0 Other (list)	-	part and is of high quality	
	6b, Horizontal (plan view) interspersion	3	Present and comprises signif vegetation and is of high c	ficant part, or more, of wetland's quality
(Select only one High (5)	Narrative	Description of Vegetat	ion Quality
	Moderately high (4)	low	Low spp diversity and/or pred disturbance tolerant native	dominance of nonnative or e species
	Low (1) None (0)	moderate	Native spp are dominant com although nonnative and/or can also be present, and a moderately high, but gene	nponent of the vegetation, r disturbance tolerant native spp species diversity moderate to rally w/o presence of rare
	<u>6c. Coverage of invasive plants.</u>		threatened of enuangered	
	Add or deduct points for coverage	high	A predominance of native sp and/or disturbance toleran absent, and high spp dive the presence of rare, three	ecies, with nonnative spp It native spp absent or virtually rsity and often, but not always, atened, or endangered spp
	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Class Q	luality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	s)
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mo	re
	Score all present using 0 to 3 scale	Minuter	aranhy Cover Seele	
	2 Vegetated hummocks/tussocks	witerotopo	Absort	
	3 Coarse woody debris >15 cm (6")	<u> </u>	Absent	
	Amphibian breeding pools	1	Present very small amounts of marginal quality	or if more common
		2	Present in moderate amounts quality or in small amounts	s, but not of highest s of highest quality
		3	Present in moderate or great	er amounts

GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 3

	Backgr	ound Informat	tion Form	
Name:	H. Fogell, A. Davis		Date:	February 21, 200
Affiliation:	MACTEC Engineering &	Consulting		
User Address:	3301 Atlantic Ave, Ralei	gh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-7			
Location of Wetl including addres available	ands is if See ORAM F	Figure in CCNPP	Wetlands Master Pla	n/USACE IP Applic
			Sources of information	
			used (check all that apply)	
Lat/Lon or UTM	38.42200/-76.43982		Site Visit	 Image: A start of the start of
USGS Quad	Cove Point, MD		USGS Topo	<u> </u>
Hydrologic Unit C	ode	20600060706	NWI Map	
Wetland Size (acr	es)	1.66	OWI Map	
How was size es	timated?		Aerial Photo	√
			Soil Survey	
			ODNR - DNAP	
	Wetlands Delineation/GIS		Delineation	
			Report/Map	\checkmark
Photograph				
final score:	I 81 P	rovisional Wetland C	ategory: ICategory 3	

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-7		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	✓ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	I YES
6: Bogs		🗌 YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands		✓ YES
9a: Lake Erie Coastal and Tributary Wetlands	🗹 NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate	✓ NO	YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland					
regulatory categories	for ORAM 5.0 scores				
Category	ORAM 5.0 Score				
1	0-29.9				
1 or 2 gray zone	30-34.9				
modified 2	35-44.9				
2	45-59.9				
2 or 3	60-64.9				
3	65-100				
81 Category 3					

Table based on FEB 2001 OEPA Standards

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Calvert Cli	iffs Nuclear Power Plant		Date:	Febluary 21, 2008
ands:	WA-8 [Did Not Score		Rater:	H. Fogell, A. Davis
0	Metric 1. Wetland Area (size). (max	6 pts)		
I Points	Select one size class and assign score.			
	>50 acres (>20.2na) (6 pts)	(5 pts)		
	10 to <25 acres (4 to <10 1ha) (4	ots)		
	3 to <10 acres (1.2 to <4ha) (3 pts	;)		
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)			
0	Metric 2. Upland buffers and surrou	Inding land use. (ma	x 14 pts)	
al Points	2a. Calculate average buffer width (select one,	<u>do not double check)</u>		
	WIDE. Buffers average 50m (164	ft) or more around wetland	perimeter (7)	
	MEDIUM. Buffers average 25m to	o <50m (82 to <164ft) arour	nd wetland perimeter	(4)
	NARROW. Buffers average 10m VERY NARROW. Buffers average	to <25m (32ft to <82ft) aro e <10m (<32ft) around wetl	und wetland perimete and perimeter (0)	er (1)
	2b. Interactive of our rounding land use (select or	e or double check & averac	re)	
	VERY LOW. 2nd growth or older	forest, prairie, savannah, w	ildlife area, etc. (7)	
	LOW. Old field (>10 years), shrut	land, young second growth	forest. (5)	
	MODERATELY HIGH. Residentia	l, fenced pasture, park, cor	servation tillage, nev	v fallow field. (3)
	HIGH. Urban, industrial, open pas	sture, row cropping, mining,	construction. (1)	
0	Metric 3. Hydrology. (max 30 pts)	3d. i	Duration inundation/s	aturation.
Points	3a. Sources of Water. Score all that apply.		(select one or double	e check & average)
	High pH groundwater (5)		Semi- to perm	anently inundated/saturated (4)
	Other groundwater (3)		Regularly inun	dated/saturated (3)
	Precipitation (1)		Seasonally int	indated (2)
	Seasonal/Intermittent surface wat	er (3)	Seasonally sa	turated in upper 30cm (12in) (1)
	Perennial surface water (lake or s	tream) (5)		
		3e	Modifications to natu	ral hydrologic regime.
	3b. Connectivity. Score all that apply.	1	(select one or double	e cneck & average)
	100 year floodplain (1)	man use /1)	Recovered (7)	apparent (12)
	Bet of wetland/upland (e.g. forest	andiiuse (1)) complex (1)	Recovering (3)	
	Part of riparian or upland corridor	(1)	Recent or no	, recovery (1)
	3c. Maximum water depth. Select only 1.	C	heck all disturba	nces observed
	>0.7 (27.6in) (3)		ditch	point source (nonstormwater)
	X 0.4 to 0.7m (15.7 to 27.6in) (2)		dike	filling/grading
	<0.4m (<15.7in) (1)		tile	road bed/RR track
			weir	dredging
			stormwater input	other- list
0	Metric 4. Habitat Alteration and De	velopment. (max 20	pts.)	-
Points	4a. Substrate disturbance. Score one or doub	le check and average.		
	None or none apparent (4)		Habitat alteration 0	and an double shark and average
	Recovered (3)	4c.	mapital alteration. So	core one or double check and average
	Recovering (2)		None or none	apparent (9)
	Recent or no recovery (1)		Recovered (6)
			Recovering (3)
	4b. Habitat development. Select one.		Recent or no r	ecovery (1)
	Excellent (7)	Check all disturbance	es observed	
	Very good (6)			
	Good (5)	mowing	L shru	b/sapling removal
	Moderately good (4)	grazing	🗌 hert	aceous/aquatic bed removal
	Fair (3)	clearcutting	🗌 sedi	mentation
	Poor to fair (2)	selective cutting	🗌 drec	lging
	Poor (1)	woody debris removal	🗌 farn	ning
			_	
		toxic pollutants	🔄 nutr	ient emrichment
		toxic pollutants	nutr	ient emrichment

Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Wetland:	WA-8 [Did Not Score]		Rater:	H. Fogell, A. Davis
J subtotal firs	t page			
	Mateia C. Ozaciał Matlanda, (may 40 at	-)		
UO	wetric 5. Special wetlands. (max 10 pt	s.)		
Subtotal Points	Check all that apply and score as indicated			
	Eog (10 pis)			
	Old Growth Earest (10 pts)			
	Mature forested wetland (5 pts)			
	Lake Erie coastal/tributary wetland-unr	estricted hydrolog	ıv (10 pts)	
	Lake Erie coastal/tributary wetland-rest	ricted hydrology	(5 pts)	
	Lake Plain Sand Prairies (Oak Opening	gs) (10 pts)		
	Relict Wet Prairies (10 pts)			
	Known occurrence state/federal threate	ened or endange	red species (10)	
	Significant migatory songbird/waterfow	I habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1 o	of Qualitative Rati	ing. (-10 pts)	
		,		`
0 0	Metric 6. Plant Communities, intersper	sion, microto	opograpny. (max 20 pts	••)
Subtotal Points	<u>6a. Wetland Vegetation Communities</u>	Vogotatio	n Community Cover Se	alo
	Score all present using 0 to 3 scale	vegetatio	Absent or comprises <0.1 ba	(0.2471 acres) continuous area
	Aqualic bed		Present and either comprises	small part of wetland's
		1	vegetation and is of model	rate quality, or comprises a
	Forest		significant part but is of low	v quality
	Mudflats		Present and either comprises	significant part of wetland's
	Open water	2	vegetation and is of model	rate quality or comprises a small
	Other (list)		part and is of high quality	
		3	Present and comprises signifi	cant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion		vegetation and is of high q	uality
	Select only one	Newstine	Description of Vogstati	an Quality
	High (5)	Narrative	Description of vegetati	
	Moderately high (4)	low	disturbance tolerant native	
	Moderately low (2)			
			although poppative and/or	ponent of the vegetation, disturbance tolerant native spo
	None (0)	moderate	can also be present, and s	species diversity moderate to
			moderately high, but gener	rally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered	spp
	Refer to Table 1 ORAM long form for list.		A predominance of native spe	ecies, with nonnative spp
		hiah	and/or disturbance tolerant	t native spp absent or virtually
	Add or deduct points for coverage		absent, and high spp diver	sity and often, but not always,
	Extensive >75 % cover (-5)			
	Moderate 25-75% cover (-3)	Mudflatar	nd Open Water Class O	uality
	Sparse 5-25% cover (-1)	iviuuliat al	Abapt (0.1 ba (0.0474 and	
	Absent (1)	1	Absent <0.1 ha to <1 ha (0.2471 acres	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9 88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mor	e
	Score all present using 0 to 3 scale	L	·	
	Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	Coarse woody debris >15 cm (6")	0	Absent	
	Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small amounts o of marginal quality	or if more common
		2	Present in moderate amounts quality or in small amounts	;, but not of highest ; of highest quality
		3	Present in moderate or greate	er amounts
		1 4	and of bighest quality	

GRAND TOTAL (max 100 pts)

Provisional Wetland Category: Category 1

Background Information Form - ORAM v.5.0

Nomo		A Davis	mation i on	Date:	February 21, 200
Affiliation:		Engineering & Consulting			1 ebidary 21, 2000
	2201 Atle	ntia Ava. Balaiah NC			
User Address:	5501 Alla	nuc Ave, Kaleigh, NC.			······································
Phone:	919-876-0)416			
e-mail address	akdavis@m	actec.com			
Wetlands Name	WA-8 [Dic	Not Score]			
Location of Wetla including addres available	ands s if	See ORAM Figure in CC Application. Did not score	NPP Wetlands e this area, bec	Master Pla ause it was	n/USACE IP an incised stream.
			Sources of used (check all t	information	
Lat/Lon or UTM	38.42233/	/-76.44245	Site Visit		
USGS Quad	Cove Point,	MD	USGS To	ро	_
Hydrologic Unit Co	ode	20600060	0706 NWI Map		
Wetland Size (acro	es)	N/A	OWI Map)	
How was size est	timated?		Aerial Ph	oto	7
			Soil Surve	зу	<u>_</u>
		.1/A	ODNR - I	ONAP	
	Г	N/A	Delineatio	on	 रि
			Report/M	ар	

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-8 [Did Not Score]		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland		YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES
6: Bogs	✓ NO	TES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands	✓ NO	TES YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	⊡ NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate	🗹 NO	YES
9e: Non-native Species Predominate	🗸 NO	YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland						
regulatory categories for ORAM 5.0 scores						
Category	ORAM 5.0 Score					
1	0-29.9					
1 or 2 gray zone	30-34.9					
modified 2	35-44.9					
2	45-59.9					
2 or 3	60-64.9					
3	65-100					
0 Category 1						

Table based on FEB 2001 OEPA Standards

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ORAM v. 5.0 Field Form Quantitative Rating

Statiands: WA-9 Rater: H. Fogell, A. Davis August Points Select one gave data and assists accoss. Select one gave data and assists accoss. Select one gave data and assists accoss. 3 to -50 care (1, 0) to 10 to 0.1 bit (1 bit (1) bit	ite: Calvert Cl	ffs Nuclear Power Plant	Date	February 21, 2008
Autor Martin 1. Weiland Area (size). (max 9 pts) State or area data and addimators Based or area data and addimator Based or area	/etlands:	WA-9	Rate	r: H. Fogell, A. Davis
Inter 2. Upland buffers and surrounding land use. (max 14 pts) 2.a. Calcutes average buffer within feeter cane, cond duals check Inter 2. Upland buffers and surrounding land use. (max 14 pts) 2.a. Calcutes average buffers one sound wetland perimeter (?) Image: Source of Multices average 20 to 1<520 to 1540 around wetland perimeter (1)	2 2 ubtotal Points	Metric 1. Wetland Area (size). (max 6 pts) Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts))	
LOW. Old field (>10 years), shrubland, young second growth freed. (5) Indext 2. Metric 3. Hydrology. (max 30 pts) 3d. Duration inundation/saturation. 3a. Sources of Water. Score all that apply. Seasonally inundated (2) Seasonally inundated (2) Seasonally inundated (2) Between stream/lake and ther human use (1) None or none apparent (12) Part of ripation or upland corridor (1) Recovering (3) Sc. Maximum water daph. Select onry 1. Select on or double check and average. An or (15.7 in) (1) A. Substrate disturbance. Score one or double check and average. A substrate disturbance. Score one or double check and average. A. Substrate disturbance. Score one or double check and average. A substrate disturbance. Score one or double check and average. A. Substrate disturbance. Score one or double check and average. A substrate disturbance. Score one or double	16 14 Ibitotal Points	X WIDE. Buffers average 50m (164ft) or multiple MEDIUM. Buffers average 50m (164ft) or multiple MEDIUM. Buffers average 25m to <50m	J land use. (max 14 p double check) ore around wetland perimetr (82 to <164ft) around wetlan n (32ft to <82ft) around wetlan (<32ft) around wetland peri uble check & average) prairie, savannah, wildlife ard	ts) er (7) nd perimeter (4) and perimeter (1) meter (0) ea, etc. (7)
4 28 Metric 3. Hydrology. (max 30 pts) 3d. Duration inundationsaliuration. 3a. Sources of Water. Score all that apply.		LOW. Old field (>10 years), shrubland, yo MODERATELY HIGH. Residential, fence HIGH. Urban, industrial, open pasture, ro	bung second growth forest. d pasture, park, conservatic w cropping, mining, constru	(5) n tillage, new fallow field. (3) ction. (1)
3e. Modifications to natural hydrologic regime. 3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) Part of ripatian or upland or oridor (1) 3c. Maximum water depth. Select only 1. 0.4 to 0.7m (15.7 to 27.6in) (2) 0.5 transformwater input 0.5 transformwater input <td>44 28 ubtotal Points</td> <td>Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) Cther groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) X Perennial surface water (lake or stream) (</td> <td>3d. Duration (select X S S S</td> <td>inundation/saturation. one or double check & average) emi- to permanently inundated/saturated (4) egularly inundated/saturated (3) easonally inundated (2) easonally saturated in upper 30cm (12in) (1)</td>	44 28 ubtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) Cther groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) X Perennial surface water (lake or stream) (3d. Duration (select X S S S	inundation/saturation. one or double check & average) emi- to permanently inundated/saturated (4) egularly inundated/saturated (3) easonally inundated (2) easonally saturated in upper 30cm (12in) (1)
3c. Maximum water depth. Select only 1. O.7 (27.6in) (3) O.7 (27.6in) (2) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch Itch point source (nonstormwater) 0.4 to 0.7m (15.7 to 27.6in) (2) Itch Itch Itch Itch 0.4 to 0.7m (15.7 to 27.6in) (2) Itch Itch Itch Itch Itch 0.4 to 0.7m (15.7 to 27.6in) (2) Itch		3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human us X Part of wetland/upland (e.g. forest), compl X Part of riparian or upland corridor (1)	3e. Modifica (select e (1) ex (1) R	tions to natural hydrologic regime. one or double check & average) lone or none apparent (12) ecovered (7) ecovering (3) Recent or no recovery (1)
8 14 Iotal Points Metric 4. Habitat Alteration and Development. (max 20 pts.) 4a. Substrate disturbance. Score one or double check and average. X None or none apparent (4) X Recovered (3) Recovering (2) X Recovering (3) 4c. Habitat alteration. Score one or double check and average. 4b. Habitat development. Select one. Recent or no recovery (1) 4c. Habitat development. Select one. Recent or no recovery (1) 4b. Habitat development. Select one. Recovering (3) 4c. Habitat development. Select one. Recovering (3) 4b. Habitat development. Select one. Recovering (3) 4c. Habitat development. Select one. Recovering (3) 4d. Habitat development. Select one. Recovering (3) 5 Selective cutting Sedimentation <		3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)	Check a ditch dike tile weir stormwa	all disturbances observed point source (nonstormwater) filling/grading road bed/RR track dredging ter input other- list
4a. Substrate disturbance. Score one of double check and average. X None or none apparent (4) X Recovered (3) Recovering (2) X Recovering (2) X Recovering (3) Recovering (3) 4b. Habitat development. Select one. Recovering (3) Excellent (7) Very good (6) Good (5) mowing Moderately good (4) grazing X Fair (3) Poor (1) selective cutting Selective cutting dredging istrict pollutants intrient emrichment	58 14	Metric 4. Habitat Alteration and Developm	nent. (max 20 pts.)	
4b. Habitat development. Select one. Recent or no recovery (1) Excellent (7) Very good (6) Good (5) mowing Moderately good (4) grazing X Fair (3) clearcutting Poor to fair (2) selective cutting Poor (1) dredging Loxic pollutants nutrient emrichment	diotal Points	A. Substrate disturbance. Score one or double check X None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1)	4c. Habitat	alteration. Score one or double check and average. lone or none apparent (9) lecovered (6) ecovering (3)
3 subtotal this page		4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) Moderately good (4) X Poor to fair (2) Poor (1)	R k all disturbances obs wing zing arcutting ective cutting ody debris removal ic pollutants	ecent or no recovery (1) erved shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient emrichment
	58 subtotal this p	age		

STOANT V. S.O FICIA FORM SEA			Deter	Echruon 21, 2008			
Site: Calvert C	liffs Nuclear Power Plant		Date:	February 21, 2008			
Wetland:	WA-9		Rater:	H. Fogell, A. Davis			
· · ·							
ൾ subtotal first	page						
58 0	Metric 5. Special Wetlands. (max 10 pt	s.)					
Subtotal Points	Check all that apply and score as indicated						
	Bog (10 pts)						
	Fen (10 pts)						
	Old Growth Forest (10 pts)						
	Mature forested wetland (5 pts)						
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)						
	Lake Erie coastal/tributary wetland-res	tricted hydrology (5 pts)				
	Lake Plain Sand Prairies (Oak Opening	gs) (10 pts)					
	Retict Wet Prairies (10 pts)	anad or and anger	ad species (10)				
	Circlination occurrence state/lederal tileat	l babitat or usage	(10 pte)				
	Significant migatory songbild/wateriow	of Qualitative Rati	(10 pts) ng (-10 pts)				
	Category Welland, See Question		ng. (10 pto)				
67 0	Metric 6 Plant Communities, interspe	rsion. microto	pography, (max 20 pts	5.)			
United Boints	Fa Wotland Vegetation Communities	•••••		,			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover So	cale			
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area			
	1 Emergent		Present and either comprise	s small part of wetland's			
	0 Shrub	1	vegetation and is of mode	erate quality, or comprises a			
	2 Forest		significant part but is of lo	w quality			
	0 Mudflats		Present and either comprise	s significant part of wetland's			
	0 Open water	2	vegetation and is of mode	erate quality or comprises a small			
	0 Other (list)		part and is of high quality				
		3	Present and comprises signi	ficant part, or more, of wetland's			
	6b. Horizontal (plan view) interspersion		vegetation and is of high t				
	Select only one	Norrativo	Description of Veretat	ion Quality			
	High (5)	Narrauve	Low one diversity and/or pre-	dominance of ponnative or			
	Moderately high (4)	low	disturbance tolerant nativ	e species			
	Moderately low (2)						
			although poppative and/o	r disturbance tolerant native SPD			
	None (0)	moderate	can also be present, and	species diversity moderate to			
			moderately high, but gene	erally w/o presence of rare			
	6c. Coverage of invasive plants.		threatened or endangered	d spp			
	Refer to Table 1 ORAM long form for list.		A predominance of native sp	ecies, with nonnative spp			
		high	and/or disturbance toleral	nt native spp absent or virtually			
	Add or deduct points for coverage	nign	absent, and high spp dive	ersity and often, but not always,			
	Extensive >75 % cover (-5)		the presence of rare, thre	atened, or endangered spp			
	X Moderate 25-75% cover (-3)						
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class C	Quality			
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acre	es)			
	Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	l acres to 2.47 acres)			
		2	Moderate 1 ha to <4 ha (2.4)	7 acres 9.88 acres)			
	6d. Microtopography	3	High 4 ha (9.88 acres) or mo	ore			
	Score all present using 0 to 3 scale	Microtopo	aranhy Cover Scale				
	2 Vegetated hummocks/tussocks	Microtope	Abased				
	2 Coarse woody debris >15 cm (6")		Absent	- 16			
	1 Standing dead > 25 cm (10") dbh	1	Present very small amounts				
				te but not of bighest			
		2	quality or in small amount	ts of highest quality			
			Present in moderate or great	ter amounts			
		1 3	I reacht in mouerate of grea				
			and of highest quality				

GRAND TOTAL (max 100 pts)

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Provisional Wetland Category:

Category 3

Background Information Form - ORAM v.5.0

	Back	ground Informat	tion Form	
Name:	H. Fogell, A. Davis		Date:	February 21, 2008
Affiliation:	MACTEC Engineering	g & Consulting	<u></u>	
User Address:	3301 Atlantic Ave, Ra	leigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			1.000
Wetlands Name	WA-9			
Location of Wetl including addres available	ands ss if See ORAN	I Figure in CCNPP	Wetlands Master Pla	n/USACE IP Applic
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38 42359/-76.44224		Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	 Image: A start of the start of
Hydrologic Unit C	ode	20600060706	NWI Map	7
Wetland Size (acr	res)	0.7	OWI Map	
How was size es	timated?		Aerial Photo	Ī
			Soil Survey	2
			ODNR - DNAP	
	Wetlands Delineation/GIS		Delineation	
			Report/Map	I
Photograph				
final score:	67	Provisional Wetland (Category: Category 3	

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-9		1819-18-18-18-18-18-18-18-18-18-18-18-18-18-

1: Critical Habitat		
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	√ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	NO 🔽	YES
6: Bogs	NO 🔽	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	√ №	YES
8b: Mature Forested Wetlands	NO N	T YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	TES YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)		YES
9c: Hydrology unrestricted		YES
9d: Native Species Predominate	✓ NO	YES
9e: Non-native Species Predominate		✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

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Table 2. Interim scoring breakpoints for wetland regulatory categories for ORAM 5.0 scores Category ORAM 5.0 Score 0-29.9 1 1 or 2 gray zone 30-34.9 modified 2 35-44.9 2 45-59.9 2 or 3 60-64.9 3 65-100

67 Category 3

Table based on FEB 2001 OEPA Standards

TE: Calvert C	litts Nuclear Power Plant			repruary 21, 2008
tlands:	WA-10		Rater:	H. Fogell, A. Davis
2	Metric 1. Wetland Area (size). (m	nax 6 pts)		
otal Points	Select one size class and assign score.			
	25 to <50 acres (20.2na) (6 pts)	ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha)	(4 pts)		
	3 to <10 acres (1.2 to <4ha) (3	pts)		
	X 0.3 to <3 acres (0.12 to <1.2h	a) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.1	2ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)			
3 14	Metric 2. Upland buffers and sur	rounding land use. (max 14 pts)	
otal Points	2a. Calculate average buffer width (select o	ne, do not double check)		
	X WIDE. Buffers average 50m (164ft) or more around wet	and perimeter (7)	
	MEDIUM. Buffers average 25	m to <50m (82 to <164ft) a	round wetland perimeter (4)
	NARROW. Buffers average 1	0m to <25m (32ft to <82ft)	around wetland perimeter	r (1)
	VERY NARROW. Butters ave	rage < rom (<32it) alound	weitand penmeter (0)	
	2b. Intensity of surrounding land use (selec	t one or double check & av	erage)	
	X VERY LOW. 2nd growth or ol	der forest, prairie, savanna	h, wildlife area, etc. (7)	
	MODERATELY HIGH Reside	nrubland, young second gro Initial fenced nasture nark	conservation tillage new	fallow field (3)
	HIGH. Urban, industrial, open	pasture, row cropping, mir	ning, construction. (1)	
	Matria 2. Wydrology (may 20 pto	,	2d Duration inundation/or	dura fia n
20	Metric 3. Hydrology. (max 30 pts	,	30. Duration inundation/se	abaak & average)
al Points	3a. Sources of Water. Score all that apply.			check & average)
	High pH groundwater (3)		Regularly inund	ated/saturated (3)
	X Precipitation (1)		Seasonally inur	ndated (2)
	Seasonal/Intermittent surface	water (3)	Seasonally satu	Irated in upper 30cm (12in) (1)
	X Perennial surface water (lake o	or stream) (5)	· · ·	
			3e. Modifications to natura	al hydrologic regime.
	3b. Connectivity. Score all that apply.		None or none a	annarent (12)
	Between stream/iake and othe	r human use (1)	X Recovered (7)	
	Part of wetland/upland (e.g. for	rest), complex (1)	X Recovering (3)	
	X Part of riparian or upland corric	ior (1)	Recent or no re	ecovery (1)
	3c. Maximum water depth. Select only 1.	Γ	Check all disturbar	ices observed
	>0.7 (27.6in) (3)		ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)		🗌 dike 🗌	filling/grading
	X <0.4m (<15.7in) (1)		🗌 tile 📃	road bed/RR track
			weir	dredging
		L	stormwater input	스 other- list
13	Metric 4. Habitat Alteration and	Development. (max	20 pts.)	
al Points	4a. Substrate disturbance. Score one or de	ouble check and average.		
	None or none apparent (4)		An Unbitat alternation Ora	to one or double check and success
	X Recovered (3)		4c. Habitat alteration. Scc	ore one or double crieck and average
	Recovering (2)		V Recovered (6)	apparent (9)
	Recent of no recovery (1)		A Recovering (3)	
	4b Habitat development Select one		Recent or no re	covery (1)
	Excellent (7)			
	Very good (6)	Check all disturba	ances observed	
	Good (5)	mowing	Shrub	/sapling removal
	X Moderately good (4)		herba	ceous/aquatic bed removal
	Fair (3)			nentation
	Poor to fair (2)	selective cutting	dredo	ling
	Poor (1)	woody debris remo	oval 🗌 farmi	ng
		toxic pollutants	nutrie	ent emrichment
subtotal this	page			

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ORAM v.	5.0 Field	Form	Quantitative Rating	

Site: Calvert	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetland:	WA-10	Rater:	H. Fogell, A. Davis

/	1	subtotal f	irst page
	10		54

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Chack all th	hat annly and	score as indicated
Check an u	lat apply and	Score as mulcaled

<u>all ule</u>	a apply and score as indicated
	Bog (10 pts)
	Fen (10 pts)
	Old Growth Forest (10 pts)
	Mature forested wetland (5 pts)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
	Lake Plain Sand Prairies (Oak Openings) (10 pts)
	Relict Wet Prairies (10 pts)
	Known occurrence state/federal threatened or endangered species (10)

- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland, See Question 1 of Qualitative Rating. (-10 pts)

56 7 Subtotal Points

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities



6b. Horizontal (plan view) interspersion





<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Extensive >75 % cover (-5) X Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0) Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
2	Coarse woody debris >15 cm (6")

1	Standin	a dead	> 25 cm	(10") dbh	

2 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area	
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality	
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality	
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality	

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

GRAND TOTAL (max 100 pts)

Provisional Wetland Category: Category:

Category 2

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Name: I Affiliation: I User Address: 3 Phone: 9 e-mail address 4 Wetlands Name 1 Location of Wetlar 1 including address 1	H. Fogell, A. Davis MACTEC Engineering & Consulting 3301 Atlantic Ave, Raleigh, NC. 919-876-0416 akdavis@mactec.com WA-10 hds if See ORAM Figure in CCNPP	Date:	February 21, 2008
Affiliation:	MACTEC Engineering & Consulting 3301 Atlantic Ave, Raleigh, NC. 919-876-0416 akdavis@mactec.com WA-10 MA-10 if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
User Address: 3 Phone: 9 e-mail address 4 Wetlands Name 1 Location of Wetlar including address	3301 Atlantic Ave, Raleigh, NC. 919-876-0416 akdavis@mactec.com WA-10 hds if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
Phone: 9 e-mail address a Wetlands Name \ Location of Wetlar	919-876-0416 akdavis@mactec.com WA-10 nds if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
e-mail address	akdavis@mactec.com WA-10 nds if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
Wetlands Name	WA-10 nds if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
Location of Wetlar	nds if See ORAM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
available		Sources of information	
		used (check all that apply)	
Lat/Lon or UTM	38.42564/-76.44304	Site Visit	
USGS Quad (Cove Point, MD	USGS Topo	<u></u>
Hydrologic Unit Coc	de 20600060706	NWI Map	
Wetland Size (acres	s) 1	OWI Map	
How was size esti	mated?	Aerial Photo	
		Soil Survey	
	National Deligention/GIS	ODNR - DNAP	
	Wetlands Delineation/GIS	Delineation	
		Report/Map	Ľ
Photograph			

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 21, 2008
Wetlands Name	WA-10		

1: Critical Habitat	✓ NO	S YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland		YES
4: Significant Breeding or Concentration Area (waterfowl)		YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	TES YES
6: Bogs		YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	TES YES
8b: Mature Forested Wetlands	✓ NO	TES YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	TES YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate	✓ NO	T YES
9e: Non-native Species Predominate		✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland				
regulatory categories for ORAM 5.0 scores				
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			
56 Category 2				

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Table based on FEB 2001 OEPA Standards

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ORAM v. 5.0 Field Form Quantitative Rating

Calvert C	lifts Nuclear Power Plant	P		February 22, 2008
ands:	WA-11	R	later:	H. Fogell, A. Davis
1	Metric 1. Wetland Area (size). (max 6	pts)		
al Points	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts)			
	25 to <50 acres (10.1 to <20.2ha) (5	pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)	•)		
	0.3 to <3 acres (0.12 to <1.2na) (2pt	S)		
	X 0,1 to <0.3 acres (0.04 to <0.12na) (i pt)		
14	Metric 2. Upland buffers and surround	ding land use. (max 1	14 pts)	
al Points	2a. Calculate average buffer width (select one, do	not double check)	. ,	
	X WIDE, Buffers average 50m (164ft)	or more around wetland pe	nmeter (7)	
	MEDIUM. Buffers average 25m to <	50m (82 to <164ft) around v	wetland perimeter (4)	
	NARROW. Buffers average 10m to	<25m (32ft to <82ft) around	d wetland perimeter (1)	
	VERY NARROW. Buffers average <	10m (<32ft) around wetland	d perimeter (0)	
	2b. Intensity of surrounding land use (select one o	<u>r double check & average)</u>	- ita area, ata (7)	
	I OW Old field (>10 years) shrublar	d young second growth fo	rest (5)	
	MODERATELY HIGH. Residential f	enced pasture, park, conse	rvation tillage, new fallo	w field. (3)
	HIGH. Urban, industrial, open pastur	e, row cropping, mining, co	nstruction. (1)	
20	Metric 3. Hydrology. (max 30 pts)	3d. Du	ration inundation/satura	tion.
al Points	3a. Sources of Water. Score all that apply.	(56	elect one or double che	ck & average)
	High pH groundwater (5)	;	X Semi- to permanent	ly inundated/saturated (4)
	X Other groundwater (3)		Regularly inundated	/saturated (3)
	X Precipitation (1)		Seasonally inundate	ed (2)
	X Seasonal/Intermittent surface water (3)	Seasonally saturate	d in upper 30cm (12in) (1)
	Perennial surface water (lake or strea	im) (5)		
		3e. Mo	difications to natural hy	drologic regime.
	30. Connectivity. Score all that apply.	(56	None or none apps	ck & average)
	Between stream/lake and other huma	an use (1)	X Recovered (7)	
	Part of wetland/upland (e.g. forest), c	omplex (1)	Recovering (3)	
	X Part of riparian or upland corridor (1)		Recent or no recov	ery (1)
				····
	3c. Maximum water depth. Select only 1.		eck all disturbances	observed
	>0.7 (27.6in) (3)		ch 🗌 po	int source (nonstormwater)
	0.4 to 0.7 m (15.7 to 27.6 in) (2)		e 🔄 fil	ing/grading
	<u> </u>		. L ro	ad bed/RR track
			ir [] dr	edging
				ner- IISt
13	Metric 4. Habitat Alteration and Devel	opment. (max 20 pt	s.)	
I Points	4a. Substrate disturbance. Score one or double of	heck and average.		
	None or none apparent (4)			
	X Recovered (3)	4c. <u>Ha</u>	bitat alteration. Score o	ne or double check and average.
	Recovering (2)		None or none appa	rent (9)
	Recent or no recovery (1)	>	K Recovered (6)	
			Recovering (3)	
	4b. Habitat development. Select one.	L	Recent or no recove	ery (1)
	Excellent (7)	book all disturbances	cheanvad	- <u></u>]
	Very good (6)	meck all disturbances	observed	
	Good (5)	mowing	shrub/sap	ling removal
	X Moderately good (4)	grazing	🗌 herbaceou	is/aquatic bed removal
	Fair (3)	clearcutting	🔲 sedimenta	ation
	Poor to fair (2)	selective cutting	🗌 dredging	
	Poor (1)	woody debris removal	farming	
		toxic pollutants	🗌 nutrient e	mrichment
	L		<u></u>	
subtotal this	page			

ORAM v. 5.0 Field Form Quantitative Rating

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Subtotal

Subtotal Poi

Site: Calver	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetland:	WA-11	Rater:	H. Fogell, A. Davis

na:	WA-11		Rater:
subtotal first	page		
0	Metric 5. Special Wetlands. (max 1	0 pts.)	
Points	Check all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts)		
	Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland	d-unrestricted hydrolog	y (10 pts)
	Lake Erie coastal/tributary wetland	d-restricted hydrology	(5 pts)
	Lake Plain Sand Prairies (Oak Op	enings) (10 pts)	
	Relict Wet Prairies (10 pts)		
	Known occurrence state/federal tr	nreatened or endange	
	Significant migatory songbird/wate	errowi nabitat or usage	(10 pts)
	Category 1 Wetland. See Question	on 1 of Qualitative Rati	ng. (-10 pts)
11	Metric 6. Plant Communities, inters	spersion, microto	opography. (max 20 pts.)
Points	6a. Wetland Vegetation Communities		
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sca
	0 Aquatic bed	0	Absent or comprises <0.1 ha (0
	0 Emergent		Present and either comprises s
	1 Shrub	1	vegetation and is of moderat
	2 Forest		signmeant part but is of low c
	0 Mudflats		Present and either comprises si
	0 Open water	2	vegetation and is of moderat
	0 Other (list)		part and is of high quality
		3	Present and comprises significa
	6b. Horizontal (plan view) interspersion		vegetation and is or high qua
	Select only one		
		Narrative	Description of vegetation
	Moderately high (4)	low	Low spp diversity and/or predor
	X Moderate (3)		
			Native spp are dominant compo
		modorate	although nonnative and/or di
	None (U)	mouerate	can also be present, and spe

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Extensive >75 % cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0) X Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks
2	Coarse woody debris >15 cm (6")

0	Standing	dead	> 25	cm (10") dbh	

Amphibian breeding pools

1	vegetation and is of moderate quality, or comprises a significant part but is of low quality	
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality	
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality	

Absent or comprises <0.1 ha (0.2471 acres) contiguous area

Present and either comprises small part of wetland's

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, atthough nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

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	Bac	ckground Information	tion Form		
Name:	H. Fogell, A. Davis		Da	ate:	February 22, 2008
Affiliation:	MACTEC Engineer	ring & Consulting			
User Address:	3301 Atlantic Ave,	Raleigh, NC.			
Phone:	919-876-0416				
e-mail address	akdavis@mactec.com				
Wetlands Name	WA-11				
Location of Weth including addres available	ands s if See OF	AM Figure in CCNPP	Wetlands Ma	ster Plar	N/USACE IP Application
			Sources of info used (check all that i	ormation apply)	
Lat/Lon or UTM	38.43123/-76.4567	8	Site Visit		
USGS Quad	Cove Point, MD		USGS Topo		
Hydrologic Unit Co	ode	20600060706	NWI Map		✓
Wetland Size (acr	es)	0.16	OWI Map		
How was size es	timated?		Aerial Photo		✓
			Soil Survey		
			ODNR - DNA	νP	
	Wetlands Delineation/	GIS	Delineation Report/Map		V
Photograph			<u> </u>		
final score:	59	Provisional Wetland (Category: C	ategory 2	

ORAM v.5.0 Field Form - Narrative Rating

Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-11		

1: Critical Habitat	✓ NO	T YES				
2: Threatened or Endangered Species	✓ NO	YES				
3: Documented High Quality Wetland	√ NO	YES				
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES				
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES				
6: Bogs	✓ NO	YES				
7: Fens	✓ NO	YES				
8a: "Old Growth Forest"	✓ NO	YES				
8b: Mature Forested Wetlands	✓ NO	YES				
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES				
9b: Hydrology result of Erosion Control Measures (Lake Erie)	NO NO	YES				
9c: Hydrology unrestricted	⊡ NO	YES				
9d: Native Species Predominate		✓ YES				
9e: Non-native Species Predominate	NO NO	YES				
10: Oak Openings	✓ NO	YES				
11: Relict Wet Prairies	✓ NO	YES				
Table 2. Interim scoring breakpoints for wetland						
--	---	--	--	--	--	--
regulatory categorie	regulatory categories for ORAM 5.0 scores					
Category	ORAM 5.0 Score					
1	0-29.9					
1 or 2 gray zone	30-34.9					
modified 2	35-44.9					
2	45-59.9					
2 or 3	60-64.9					
3	65-100					
59 Category	2					

Table based on FEB 2001 OEPA Standards

ORAM v.	5.0 Field Form	Quantitative Rating

Site: Calv	ert Cliffs Nuclear Power Plant		Date:	February 22, 2008
Wetlands	· · · · · · · · · · · · · · · · · · ·	VA-12	Rater:	H. Fogell, A. Davis

otal Points	Select one size class and assign score.
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4na) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	$\frac{X}{x} = 0.1 \text{ to } <0.3 \text{ acres } (0.04 \text{ to } <0.12 \text{ ha}) (1 \text{ pt})$
11	Metric 2. Upland buffers and surrounding land use. (max 14 pts)
otal Points	2a. Calculate average buffer width (select one, do not double check)
	X WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to < 164h) around wetland perimeter (4)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
	2b. Intensity of surrounding land use (select one or double check & average)
	X LOW. Old field (>10 years), shrubland, young second growth forest. (5)
	X MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)
19	Metric 3. Hydrology. (max 30 pts) 3d. Duration inundation/saturation.
tal Points	3a. Sources of Water, Score all that apply. (select one or double check & average)
	High pH groundwater (5) X Semi- to permanently inundated/saturated (4)
	X Precipitation (1) Seasonally inundated (2)
	X Seasonal/Intermittent surface water (3) Seasonally saturated in upper 30cm (12in) (1)
	3e. Modifications to natural hydrologic regime.
	3b. Connectivity. Score all that apply. (select one or double check & average)
	X Between stream/lake and other human use (1) X Recovered (7)
	X Part of wetland/upland (e.g. forest), complex (1) X Recovering (3)
	Part of nparian or upland cofridor (1) Recent or no recovery (1)
	3c. Maximum water depth. Select only 1.
	0.4 to 0.7m (15.7 to 27.6in) (2)
	X <0.4m (<15.7in) (1)
	L weir L dredging
	Matrie 4 Habitat Alteration and Development (max 20 pts.)
12 tal Points	4a. Substrate disturbance. Score one or double check and average.
	None or none apparent (4)
	Recovering (2)
	Recent or no recovery (1)
	Recovering (3)
	4b. Habitat development. Select one. [Recent or no recovery (1)]
	Very good (6) Check all disturbances observed
	Good (5) mowing shrub/sapling removal
	Moderately good (4) grazing herbaceous/aquatic bed removal
	X Fair (3) L clearcutting setting
	Poor (1) Selective cutting Credging
	toxic pollutants

ite: Calvert C	liffs Nuclear Power Plant		Date:	February 21, 2008
/etland:	WA-12		Rater:	H. Fogell, A. Davis
-				
subtotal first	t page			
43 0	Metric 5 Special Wetlands (max 10 pt	s.)		
ubtotal Points	Check all that apply and score as indicated	~1)		
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)			
	Lake Erie coastal/tributary wetland-unr	estricted hydrolog	ıy (10 pts)	
	Lake Erie coastal/tributary wetland-res	tricted hydrology	(5 pts)	
	Lake Plain Sand Prairies (Oak Openin	gs) (10 pts)		
	Relict Wet Prairies (10 pts)			
	Known occurrence state/federal threat	ened or endange	red species (10)	
	Significant migatory songbird/waterfow	l habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rat	ng. (-10 pts)	
51 8	Metric 6. Plant Communities, intersper	rsion, microte	pography. (max 20 pts	5.)
ototal Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sc	
	Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	1 Emergent		Present and either comprises	s small part of wetland's
	1 Shrub	1	significant part but is of low	rate quality, or comprises a
	2 Forest			
			Present and either comprises	s significant part of wetland's
	Open water	2	nart and is of high quality	frate quality of comprises a small
	0 Other (list)		Dresent and comprises signif	George and an mana of wolland's
	6h Harizantal (alan view) internamian	3	vegetation and is of high c	ncant part, of mole, of wettand s
	80. Honzon(ar (plan view) interspersion	l		1
	High (5)	Narrative	Description of Vegetati	ion Quality
	Moderately high (4)		I ow spp diversity and/or prec	
	Moderate (3)	low	disturbance tolerant native	
	X Moderately low (2)			
			Native spp are dominant com	ponent of the vegetation,
	None (0)	moderate	can also be present, and s	species diversity moderate to
			moderately high, but gene	rally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered	l spp
	Refer to Table 1 ORAM long form for list.		A predominance of pative spo	ecies with nonnative spo
			and/or disturbance toleran	at native spp absent or virtually
	Add or deduct points for coverage	nign	absent, and high spp dive	rsity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp
	X Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Q	luality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	s)
	Absent (1)	11	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mor	re
	Score all present using 0 to 3 scale			
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	2 Coarse woody debris >15 cm (6")	0	Absent	
	1 Standing dead > 25 cm (10") dbh	1	Present very small amounts of	or if more common
	Amphibian breeding pools		of marginal quality	
		2	Present in moderate amounts	s, but not of highest
			quality or in small amounts	s of highest quality
		3	Present in moderate or greate	er amounts

GRAND TOTAL (max 100 pts)

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Provisional Wetland Category: Category:

Category 2

Background Information Form - ORAM v.5.0

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	Bac	kground Inform	ation Form	
Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Engineer	ing & Consulting		
User Address:	3301 Atlantic Ave, I	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com	·		
Wetlands Name	WA-12			
Location of Wetl including addres available	ands ssif See OR	AM Figure in CCNP	P Wetlands Master Pla	an/USACE IP Application
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.43020/-76.4546	2	Site Visit	V
USGS Quad	Cove Point, MD		USGS Topo	✓
Hydrologic Unit C	ode	2060006070	6 NWI Map	
Wetland Size (ac	res)	0.2	8 OWI Map	
How was size es	stimated?		Aerial Photo	<u> </u>
			Soil Survey	
			ODNR - DNAP	
Wetlands Delineation/GIS			Delineation Report/Map	V
Photograph				
final score:	51	Provisional Wetland	Category: Category 2	· · · · · · · · · · · · · · · · · · ·

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-12		

P		
1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	NO 🔽	YES
4: Significant Breeding or Concentration Area (waterfowl)	⊡ NO	YES
5: Category 1 Wetlands (hydrologically isolated)		T YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands		YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	T YES
9d: Native Species Predominate	✓ NO	🗌 YES
9e: Non-native Species Predominate	🗌 NO	✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	TES YES

Table 2. Interim scoring breakpoints for wetland					
regulatory categories for ORAM 5.0 scores					
Category	ORAM 5.0 Score				
1	0-29.9				
1 or 2 gray zone	30-34.9				
modified 2	35-44.9				
2	45-59.9				
2 or 3	60-64.9				
3	65-100				
51 Category 2	2				

Table based on FEB 2001 OEPA Standards

Calvert C	iffs Nuclear Power Plant	Date:	February 22, 2008
lands:	WA-12	Rater:	H. Fogell, A. Davis
	Metric 1. Wetland Area (size). (max 6 pts)		
al Points	Select one size class and assign score.		
	25 to (50 acres)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)		
11	Metric 2. Upland buffers and surrounding la	and use. (max 14 pts)	
al Points	2a. Calculate average buffer width (select one, do not dou	<u>ıble check)</u>	
	X WIDE. Buffers average 50m (164ft) or more	around wetland perimeter (7)	
	MEDIUM. Buffers average 25m to <50m (82	? to <164ft) around wetland perimeter (4)	
	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<	32ft) around wetland perimeter (0)	
	2b. Intensity of surrounding land use (select one or double	<u>e check & average)</u>	
	VERY LOW. 2nd growth or older forest, prai	ne, savannah, wildlife area, etc. (7)	
	X LOW. Old field (>10 years), shrubland, youn	ig second growin forest. (5) asture, park, conservation tillage, new fa	low field (3)
	HIGH. Urban, industrial, open pasture, row of	propping, mining, construction. (1)	
19	Metric 3, Hydrology. (max 30 pts)	3d. Duration inundation/satu	uration.
al Points	3a. Sources of Water. Score all that apply	(select one or double ci	heck & average)
at i onto	High pH groundwater (5)	X Semi- to permane	entiv inundated/saturated (4)
	X Other groundwater (3)	Regularly inupdat	ed/saturated (3)
	X Precipitation (1)	Seasonally inund	ated (2)
	X Seasonal/Intermittent surface water (3)	Seasonally satura	ated in upper 30cm (12in) (1)
	Perennial surface water (lake or stream) (5)		
		3e. Modifications to natural	hydrologic regime.
	3b. Connectivity. Score all that apply.	(select one or double c	heck & average)
	100 year floodplain (1)	None or norie ap	parent (12)
	X Between stream/lake and other human use (1) X Recovered (7)	
	X Part of wetland/upland (e.g. forest), complex	(1) X Recovering (3)	
	Part of riparian or upland corridor (1)	Kecent or no rec	overy (1)
	3c. Maximum water depth. Select only 1.	Check all disturbanc	es observed
	>0.7 (27.6in) (3)	ditch 🗌	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)	🗌 dike 🔽	filling/grading
	X<0.4m (<15.7in) (1)	l 🗌 tile 📃	road bed/RR track
		weir	dredging
		stormwater input	other- list
12	Metric 4. Habitat Alteration and Developme	nt. (max 20 pts.)	
Points	4a. Substrate disturbance. Score one or double check ar	nd average.	
	None or none apparent (4)		
	X Recovered (3)	4c. Habitat alteration. Score	e one or double check and averag
	Recovering (2)	None or none ap	parent (9)
	Recent or no recovery (1)	X Recovered (6)	
		Recovering (3)	
	4b. Habitat development. Select one.	Recent or no reco	overy (1)
	Excellent (7)	all disturbances observed	
	Very good (6)		
	Good (5)	ng Shrub/s	apling removal
	Moderately good (4)	g 🗌 herbace	eous/aguatic bed removal
	X Fair (3)	utting 🗌 sedime	ntation
	Poor to fair (2)	ve cutting dredgir	ng
	Poor (1)	debris removal farming)
	toxic p	ollutants 🗌 nutrien	t emrichment
1		<u> </u>	
subtotal this	page		

ORAN	٨v.	5.0	Field F	om	Quantitativ	e Rating	

Site: Calvert	Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetland:	WA-12	Rater:	H. Fogell, A. Davis

.3 su	btotal first	page
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43

Subtotal Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

Can	
	Bog (10 pts)
	Fen (10 pts)
	Old Growth Forest (10 pts)
	Mature forested wetland (5 pts)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
	Lake Plain Sand Prairies (Oak Openings) (10 pts)
	Relict Wet Prairies (10 pts)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migatory songbird/waterfowl habitat or usage (10 pts)

Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

51 8 Subtotal Points

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

<u>6a. Wetland Vegetation Communities</u> Score all present using 0 to 3 scale

e	all pre	sent using 0 to 3 scale
	0	Aquatic bed
	1	Emergent
I	1	Shrub
	2	Forest
	0	Mudflats
	0	Open water
	0	Other (list)

6b. Horizontal (plan view) interspersion

Select only one



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Extensive >75 % cover (-5) X Moderate 25-75% cover (-3) Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

6d. Microtopography

Score all present using 0 to 3 scale

Absent (1)

- 1 Vegetated hummocks/tussocks
- 2 Coarse woody debris >15 cm (6")
- 1 Standing dead > 25 cm (10") dbh
- 1 Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

GRAND TOTAL (max 100 pts)

Provisional Wetland Category: Category 2

Background Information Form - ORAM v.5.0

Name: H. Fogeli, A. Davis Date: February 22, 2008 Affiliation: MACTEC Engineering & Consulting	-	Ba	ckground Informa	tion Form	
Affiliation: MACTEC Engineering & Consulting User Address: 3301 Atlantic Ave, Raleigh, NC. Phone: 919-876-0416 e-mail address akdavis@mactec.com Wetlands Name WA-12 Location of Wetlands including address if available See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Lat/Lon or UTM 38.43020/-76.45462 Site Visit Image: Consult of the apply image: Consult of the ap	Name:	H. Fogell, A. Davis		Date:	February 22, 2008
User Address: 3301 Atlantic Ave, Raleigh, NC. Phone: 919-876-0416 e-mail address akdavis@mactec.com Wetlands Name WA-12 Location of Wetlands including address if See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Sources of information used (check all that apply) Lat/Lon or UTM 38.43020/-76.45462 Site Visit I USGS Quad Cove Point, MD USGS Topo I How was size estimated? Wetlands Size (acres) 0.28 OWI Map I How was size estimated? Wetlands Delineation/GIS Photograph	Affiliation:	MACTEC Enginee	ring & Consulting		
Phone: 919-876-0416 e-mail address akdavis@mactec.com Wetlands Name WA-12 Location of Wetlands including address if See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Sources of information used (check all that apply) Image: Comparison of the comparis	User Address:	3301 Atlantic Ave,	Raleigh, NC.		
e-mail address atdavis@mactec.com Wetlands Name WA-12 Location of Wetlands including address if See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Sources of information used (check all that apply) Lat/Lon or UTM 38.43020/-76.45462 Site Visit USGS Quad Cove Point, MD USGS Topo Phydrologic Unit Code Cove Point, MD USGS Topo Phydrologic Unit Code Cove Point, MD USGS Topo Phydrologic Unit Code Cove Point, MD USGS Cope Phydrologic Unit Code Cove Point, MD Phydrologi	Phone:	919-876-0416			
Wetlands Name WA-12 Location of Wetlands including address if See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Sources of information used (check all that apply) Lat/Lon or UTM 38.43020/-76.45462 Site Visit 2 USGS Quad Cove Point, MD USGS Topo 2 Hydrologic Unit Code 2060060706 NWI Map 2 Wetland Size (acres) 0.28 OWI Map 2 How was size estimated? Aerial Photo 2 Soil Survey 2 Wetlands Delineation/GIS ODNR - DNAP ODNR - DNAP ODNR - DNAP 0 Photograph Image: Comparison of the state of	e-mail address	akdavis@mactec.com			
Location of Wetlands including address if See ORAM Figure in CCNPP Wetlands Master Plan/USACE IP Applicat available Sources of information used (check all that apply) Lat/Lon or UTM 38.43020/-76.45462 Site Visit USGS Quad Cove Point, MD USGS Topo Wetland Size (acres) 0.28 OWI Map Wetland Size (acres) 0.28 OWI Map Wetlands Delineation/GIS Photograph Find the apply of the address of the	Wetlands Name	WA-12			
Sources of information used (check all that apply)	Location of Wetl including addres available	ands is if See Of	RAM Figure in CCNPP	9 Wetlands Master Pla	n/USACE IP Application
Lat/Lon or UTM 38.43020/-76.45462 Site Visit USGS Quad Cove Point, MD USGS Topo Hydrologic Unit Code 20600060706 NWI Map Wetland Size (acres) 0.28 OWI Map Wetlands Delineation/GIS Wetlands Delineation/GIS Photograph Photograph Photograph Company Company Compan				Sources of information used (check all that apply)	
USGS Quad Cove Point, MD USGS Topo Hydrologic Unit Code 20600060706 NWI Map Wetland Size (acres) 0.28 OWI Map How was size estimated? Wetlands Delineation/GIS Photograph Photograph	Lat/Lon or UTM	38.43020/-76.4546	62	Site Visit	7
Hydrologic Unit Code 20600060706 NWI Map Wetland Size (acres) 0.28 OWI Map How was size estimated? Wetlands Delineation/GIS Photograph Phot	USGS Quad	Cove Point, MD		USGS Topo	
Wetland Size (acres) 0.28 OWI Map	Hydrologic Unit C	ode	20600060706	NWI Map	<u></u>
How was size estimated? Aerial Photo Image: Soil Survey Image: Soi	Wetland Size (acr	es)	0.28	BOWI Map	
Wetlands Delineation/GIS Soil Survey ODNR - DNAP Delineation Report/Map	How was size es	timated?		Aerial Photo	
Wetlands Delineation/GIS ODNR - DNAP Delineation Report/Map Photograph Image: Comparison of the second of the				Soil Survey	
Delineation Report/Map			010	ODNR - DNAP	
Photograph		Wetlands Delineation/	GIS	Delineation Report/Map	7
	Photograph	· · · · · · · · · · · · · · · · · · ·			······
			Brouisianal Walland		

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-12		

1: Critical Habitat	⊡ NO	L] YES
2: Threatened or Endangered Species	V NO	TES .
3: Documented High Quality Wetland	V NO	🗌 YES
4: Significant Breeding or Concentration Area (waterfowl)	⊡ NO	YES
5: Category 1 Wetlands (hydrologically isolated)		YES
6: Bogs	⊡ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	⊡ NO	YES
8b: Mature Forested Wetlands	⊡ NO	YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate	✓ NO	YES
9e: Non-native Species Predominate		✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies		YES

Table 2. Interim scoring breakpoints for wetland			
regulatory categori	es for ORAM 5.0 scores		
Category	ORAM 5.0 Score		
1	0-29.9		
1 or 2 gray zone	30-34.9		
modified 2	35-44.9		
2	45-59.9		
2 or 3	60-64.9		
3	65-100		
51 Category	2		

Table based on FEB 2001 OEPA Standards

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Site: Calvert C	liffs Nuclear Power Plant		Date:	February 22, 2008
etlands:	WA-13	<u> </u>	Rater:	H. Fogell, A. Davis
2 2	Metric 1. Wetland Area (size). (m	ax 6 pts)		
btotal Points	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts)	(5 ote)		
	10 to <25 acres (4 to <10.1ha)	(4 pts)		
	3 to <10 acres (1.2 to <4ha) (3	pts)		
	X 0.3 to <3 acres (0.12 to <1.2ha	a) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.12	?ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)			
6 14	Metric 2. Upland buffers and surr	ounding land use.	(max 14 pts)	
total Points	2a. Calculate average buffer width (select or	ne, do not double check)		
	X WIDE. Buffers average 50m (*	64ft) or more around wel	land perimeter (7)	
	MEDIUM. Buffers average 25r	n to <50m (82 to <164ft) a	around wetland perimeter (4)	
	NARROW. Buffers average 10	$m \text{ to } <25m (32\pi \text{ to } <82\pi \text{ or } <32\pi \text{ to } <82\pi \text{ or } <32\pi \text{ or } <$) around wetland perimeter (1)
	VERT NARROW. Bullets aver		weitand perimeter (0)	
	2b. Intensity of surrounding land use (select	one or double check & a	verage)	
	X VERY LOW 2nd growth or old	er forest, prairie, savanna	ah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), sh	rupland, young second gi stial fenced nasture park	conservation tillage new fe	liow field (3)
	HIGH. Urban, industrial, open	pasture, row cropping, mi	ning, construction. (1)	
	Matria 2 Hudrology (may 20 sta)		3d Duration inundation bat	ration
20 <u>20</u>	werric 5. nyarology. (max 30 pts)		Su. Duration inundation/satu	
otal Points	3a. Sources of Water. Score all that apply.		(select one or double c	neck & average)
	High pH groundwater (5)		Regularly inundat	ted/saturated (3)
	X Precipitation (1)		Seasonally inunda	ated (2)
	X Seasonal/Intermittent surface w	vater (3)	Seasonally satura	ated in upper 30cm (12in) (1)
	Perennial surface water (lake o	r stream) (5)		
			3e' Modifications to natural	hydrologic regime.
	3b. Connectivity. Score all that apply.		(select one or double c	heck & average)
	Between stream/lake and other	buman use (1)	X Recovered (7)	parent (12)
	Part of wetland/upland (e.g. for	est), complex (1)	Recovering (3)	
	X Part of riparian or upland corrid	or (1)	Recent or no rec	overy (1)
	3c Maximum water depth Select only 1]	Check all disturbanc	es observed
	>0.7 (27.6in) (3)		ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)		🗌 dike 🛛	filling/grading
	X <0.4m (<15.7in) (1)		🗌 tile 🛛 🗌	road bed/RR track
			weir	dredging
			stormwater input	other- list
13	Metric 4. Habitat Alteration and D	evelopment. (max	20 pts.)	
otal Points	4a. Substrate disturbance. Score one or do	uble check and average.		
	None or none apparent (4)		4- 11-LN / H ··· -	
	X Recovered (3)		4c. Habitat alteration. Score	e one or double check and averag
	Recovering (2)		None or none ap	oparent (9)
	Kecent or no recovery (1)		A Recovered (6)	
	4b. Habitat development. Select one		Recent or no reco	overy (1)
	Excellent (7)			· · ·
	Very good (6)	Check all disturb	ances observed	
	Good (5)	mowing	shrub/s	sapling removal
	X Moderately good (4)	grazing	herbace	eous/aquatic bed removal
	Fair (3)		sedime	ntation
	Poor to fair (2)	selective cutting	dredgir	ng
	Poor (1)	woody debris rem	oval 🗌 farming	
		toxic pollutants	🗌 nutrien	t emrichment
		L		
subtotal this	page			

Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Wetland:	WA-13		Rater:	H. Fogell, A. Davis
ہے۔ 49 0 Subtotal Points	st page Metric 5. Special Wetlands. (max 10 Check all that apply and score as indicated	pts.)		
	Bog (10 pts) Fen (10 pts) Old Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-u Lake Erie coastal/tributary wetland-u Lake Plain Sand Prairies (Oak Open Relict Wet Prairies (10 pts) Known occurrence state/federal thre Significant migatory songbird/waterfor Category 1 Wetland. See Question	nrestricted hydrolog estricted hydrology ings) (10 pts) atened or endange owl habitat or usage 1 of Qualitative Rat	gy (10 pts) (5 pts) red species (10) • (10 pts) ing. (-10 pts)	
57 8 Subtotal Points	Metric 6. Plant Communities, intersp 6a. Wetland Vegetation Communities	ersion, microte	opography. (max 20 pts	3.) Sala
	Score all present using 0 to 3 scale	vegetatio	Absort or comprises <0.1 bo	
	0 Aquatic bed 0 Emergent 2 Shrub 1 Forest	1	Present and either comprises <0.1 ha Present and either comprises vegetation and is of mode significant part but is of low	(0.247 acres) conliguous area s small part of wetland's trate quality, or comprises a w quality
	0 Mudflats 0 Open water 0 Other (list)	2	Present and either comprises vegetation and is of mode part and is of high quality	s significant part of wetland's rate quality or comprises a small
	6b. Horizontal (plan view) interspersion	3	Present and comprises signif vegetation and is of high o	ficant part, or more, of wetland's quality
	Select only one High (5)	Narrative	Description of Vegetati	ion Quality
	Moderately high (4) Moderate (3)	low	Low spp diversity and/or pred disturbance tolerant native	dominance of nonnative or e species
	Moderately low (2) X Low (1) None (0) 6c. Coverage of invasive plants	moderate	Native spp are dominant com although nonnative and/or can also be present, and s moderately high, but gene threatened or endangered	nponent of the vegetation, r disturbance tolerant native spp species diversity moderate to rrally w/o presence of rare t spp
	Refer to Table 1 ORAM long form for list. Add or deduct points for coverage	high	A predominance of native spe and/or disturbance toleran absent, and high spp diver the presence of rare, threa	ecies, with nonnative spp It native spp absent or virtually rsity and often, but not always, atened, or endangered spp
	Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Class Q	luality
	X Nearly Absent <5% cover (0) Absent (1)	0 1 2	Absent <0.1 ha (0.2471 acres Low 0.1 ha to <1 ha (0.2471 Moderate 1 ha to <4 ha (2.47	s) acres to 2.47 acres) acres 9.88 acres)
	<u>6d. Microtopography</u> Score <u>all pre</u> sent using 0 to 3 scale	3	High 4 ha (9.88 acres) or mor	re
	1 Vegetated hummocks/tussocks 2 Coarse woody debris >15 cm (6")	Microtopo 0	graphy Cover Scale	
	0 Standing dead > 25 cm (10") dbh	1	Present very small amounts of marginal quality	or if more common

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

	Backg	round Informat	ion Form	
Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Engineering	& Consulting	<u></u>	
User Address:	3301 Atlantic Ave, Rale	eigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-13			
Location of Wetl including addres available	ands s if See ORAM	Figure in CCNPP	Wetlands Master Pla	an/USACE IP Application
			Sources of informatior used (check all that apply)	
Lat/Lon or UTM	38.42987/-76.45614		Site Visit	
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit C	ode	20600060706	NWI Map	
Wetland Size (acr	res)	0.3	OWI Map	
How was size es	timated?		Aerial Photo	<u>ح</u>
			Soil Survey	✓
			ODNR - DNAP	
	Wetlands Delineation/GIS		Delineation Report/Map	v
final score:		Provisional Wetland C	Category: Category	2

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ORAM v.5.0 Field Form - Narrative Rating

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1.

Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-13		·

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	✓ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)		YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands	√ NO	YES
9a: Lake Erie Coastal and Tributary Wetlands	√ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	T YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate		YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland					
regulatory categories for ORAM 5.0 scores					
Category ORAM 5.0 Score					
1	0-29.9				
1 or 2 gray zone	30-34.9				
modified 2	35-44.9				
2	45-59.9				
2 or 3	60-64.9				
3	65-100				
57 Category	2				

Table based on FEB 2001 OEPA Standards

· · ·

Site: Calvert Clif	fs Nuclear Power Plant		Date:	February 22, 2008
Wetlands:	WA-14	R	Rater:	H. Fogell, A. Davis
·				
1 1 1	Metric 1. Wetland Area (size). (max 6	i pts)		
Subtotal Points	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts)	E pto)		
	10 to <25 acres (4 to <10 1ba) (4 bt	s)		
	3 to <10 acres (1.2 to <4ha) (3 pts)	-,		
	0.3 to <3 acres (0.12 to <1.2ha) (2p	xts)		
	X 0.1 to <0.3 acres (0.04 to <0.12ha) ((1 pt)		
	<			
10 9	Metric 2. Upland buffers and surroun	iding land use. (max	14 pts)	
ubtotal Points	2a. Calculate average buffer width (select one, do	o not double check)		
	WIDE. Buffers average 50m (164ft)) or more around wetland pe	erimeter (7)	
	X MEDIUM. Buffers average 25m to <	<50m (82 to <164ft) around	wetland perimeter (4)	
	NARROW. Buffers average 10m to	3 <25m (32ft to <82ft) around <10m (<32ft) around wetlan	nd wettand perimeter (1) nd perimeter (0)	
	2b. Intensity of surrounding land use (select one of	or double check & average)) Ilife area, etc. (7)	
	VERY LOW. 2nd growth or older to	and young second growth for	prest. (5)	
	MODERATELY HIGH. Residential,	fenced pasture, park, conse	ervation tillage, new fallow fie	d. (3)
	HIGH. Urban, industrial, open pastu	ure, row cropping, mining, co	onstruction. (1)	
25 15	Metric 3. Hydrology. (max 30 pts)	3d. Di	uration inundation/saturation.	
ubtotal Points	3a. Sources of Water, Score all that apply.	(5	select one or double check &	average)
	High pH groundwater (5)	Ĺ	X Semi- to permanently inc	undated/saturated (4)
	X Other groundwater (3)		Regularly inundated/satu	irated (3)
	X Precipitation (1)		Seasonally inundated (2)
	X Seasonal/Intermittent surface water	(3)	Seasonally saturated in	upper 30cm (12m) (1)
	Perennial surface water (lake or stre	eam) (5) 3e. <i>M</i> a	odifications to natural hydrolo	aic reaime.
	3b. Connectivity. Score all that apply.	(5	select one or double check &	average)
	100 year floodplain (1)	E	None or none apparent	(12)
	X Between stream/lake and other hum	nan use (1)	Recovered (7)	
	Part of wetland/upland (e.g. forest),	complex (1)	X Recent or no recovery (1)
		′ L.		
	3c. Maximum water depth. Select only 1.	 	eck all disturbances ob	served
	>0.7 (27.6in) (3)		tch Dipoint s	ource (nonstormwater)
	$V_{\rm c}$ = 0.4 to 0.7m (15.7 to 27.6m) (2)		ke [√] filling/j	grading
			eir 🗌 dredai	
		🗹 sto	ormwater input	list
20 1 1	Metric 4 Habitat Alteration and Deve	elopment. (max 20 n	ts.)	
LJ 4	4a. Substrate disturbance. Score one or double	check and average.	,	
Letotal i onno	None or none apparent (4)	-		
	Recovered (3)	4c. <u>H</u>	labitat alteration. Score one o	r double check and average.
	Recovering (2)	F	None or none apparent	(9)
	X Recent or no recovery (1)	Ļ	Recovered (6)	
		⊢	Recovering (3)	1)
	4b. Habitat development. Select one.		A Recent of no recovery (1)
		Check all disturbance	s observed	
	Very good (6)		shrub/sanling	removal
	Very good (6) Good (5)	mowing	shrub/sapling	removal quatic bed removal
	Very good (6) Good (5) Moderately good (4) Fair (3)	grazing clearcutting	shrub/sapling herbaceous/ac sedimentation	removal quatic bed removal
	Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2)	mowing grazing clearcutting selective cutting	shrub/sapling herbaceous/ac sedimentation dredging	removal quatic bed removal
	Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	mowing grazing clearcutting selective cutting woody debris removal	shrub/sapling herbaceous/ac sedimentation dredging farming	removal quatic bed removal

Ite: Calvert C	liffs Nuclear Power Plant		Date:	February 21, 2008
letland:	WA-14		Rater:	H. Fogell, A. Davis
· · · · · · · · · · · ·				
.9 subtotal first	page			
29 0	Metric 5. Special Wetlands, (max 10 pt	s.)		
btotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)			
	Lake Erie coastal/tributary wetland-unr	estricted hydrolog	y (10 pts)	
	Lake Erie coastal/tributary wetland-rest	tricted hydrology (5 pts)	
	Lake Plain Sand Prairies (Oak Opening	gs) (10 pts)		
	Relict Wet Praines (10 pts)	anad or and ange	ed species (10)	
	Significant migatory songbird/waterfow	l babitat or usage	(10 pts)	
	Category 1 Wetland See Question 1	of Qualitative Rati	na (-10 pts)	
			······································	
34 5	Metric 6. Plant Communities, intersper	sion, microto	pography. (max 20 pts	s.)
btotal Points	6a. Wetland Vegetation Communities		· • •	
	Score all present using 0 to 3 scale	Vegetatio	Community Cover Sc	ale
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	1 Emergent		Present and either comprises	s small part of wetland's
	0 Shrub	1	vegetation and is of mode	rate quality, or comprises a
	1 Forest		significant part but is of low	v quality
	0 Mudflats		Present and either comprises	s significant part of wetland's
	O Open water	2	nart and is of bigh quality	rate quality or comprises a small
	0 Other (list)		Procept and comprision signif	icant part or more of wetland's
	6h Horizontal (nlan view) interspersion	3	vegetation and is of high c	guality
	Select only one	L		
	High (5)	Narrative	Description of Vegetati	ion Quality
	Moderately high (4)	1	Low spp diversity and/or pred	lominance of nonnative or
	Moderate (3)	iow	disturbance tolerant native	species
	X Moderately low (2)		Native spp are dominant com	ponent of the vegetation.
	Low (1)		although nonnative and/or	disturbance tolerant native spp
	None (0)	moderate	can also be present, and s	species diversity moderate to
			moderately high, but gene threatened or endangered	rally w/o presence of rare
	6c. Coverage of invasive plants.			
	Refer to Table 1 ORAM long form for list.		A predominance of native spo	ecies, with nonnative spp
	Add or deduct points for coverage	high	and/or disturbance toleran absent, and high spp diver	rsity and often, but not always.
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp
	X Moderate 25-75% cover (-3)	L	L	
	Sparse 5-25% cover (-1)	Mudflat ar	d Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	5)
	Absent (1)	11	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mor	re
	Score all present using 0 to 3 scale			
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	<u></u>
	2 Coarse woody debris >15 cm (6")	0	Absent	
	0 Standing dead > 25 cm (10") dbh	· 1	Present very small amounts of	or if more common
	1 Amphibian breeding pools		ot marginal quality	
		2	Present in moderate amounts	s, but not of highest s of highest quality
			Procent in mederate at counts	
		3	riesent in moderate or great	er amounts
			ann or finnaer renaind	

GRAND TOTAL (max 100 pts)

Provisional Wetland Category: 1 or 2 gray zone

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Background Information Form - ORAM v.5.0

	Bacl	kground Informa	ation Form		
Name:	H. Fogell, A. Davis			Date:	February 22, 2008
Affiliation:	MACTEC Engineeri	ng & Consulting			
User Address:	3301 Atlantic Ave, R	aleigh, NC.			
Phone:	919-876-0416				
e-mail address	akdavis@mactec.com				
Wetlands Name	WA-14				
Location of Wet including addres available	lands ss if See ORA	AM Figure in CCNPI	P Wetlands M	laster Plai	n/USACE IP Application
			Sources of ir used (check all tha	formation It apply)	
Lat/Lon or UTM	38.42822/-76.45391		Site Visit		
USGS Quad	Cove Point, MD		USGS Top	0	
Hydrologic Unit C	Code	2060006070	6 NWI Map		✓
Wetland Size (ac	res)	0.3	7 OWI Map		
How was size es	stimated?		Aerial Phot	0	<u></u>
			Soil Survey		<u> </u>
			ODNR - DN	IAP	
	Wetlands Delineation/G	15	Delineation Report/Map	þ	v
Photograph					
final score:		Provisional Watland	Category:	1 or 2 grav	zone
final score:	34	Provisional vvetland	Calegory:	i or z gray	

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Wetlands Name WA-14	Name:	H. Fogell, A. Davis	Date	: February 22, 2008
	Wetlands Name	WA-14		

1: Critical Habitat	⊡ NO	YES
2: Threatened or Endangered Species		YES
3: Documented High Quality Wetland	⊡ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	⊡ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	V NO	YES
6: Bogs	V NO	YES
7: Fens	✓ NO	TES YES
8a: "Old Growth Forest"		YES
8b: Mature Forested Wetlands		YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	TES YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)		YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate	✓ NO	YES
9e: Non-native Species Predominate		✓ YES
10: Oak Openings	NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland						
regulatory categorie	regulatory categories for ORAM 5.0 scores					
Category	ORAM 5.0 Score					
1	0-29.9					
1 or 2 gray zone	30-34.9					
modified 2	35-44.9					
2	45-59.9					
2 or 3	60-64.9					
3	65-100					
34 1 or 2 gra	y zone					

Table based on FEB 2001 OEPA Standards

 $(\cdot :$

te: Calvert C	liffs Nuclear Power Plant		Date:	February 22, 2008
tlands:	WA-15		Rater:	H. Fogell, A. Davis
2 2	Metric 1. Wetland Area (size). (m	ax 6 pts)		
ototal Points	Select one size class and assign score.			
	>50 acres (>20.2ha) (6 pts)			
	25 to <50 acres (10.1 to <20.2	ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha)	(4 pts)		
	3 to <10 acres (1.2 to <4ha) (3	pts)		
	X 0.3 to <3 acres (0.12 to <1.2h	a) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.1	2ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)			
6 14	Metric 2. Upland buffers and sur	ounding land use. (m	nax 14 pts)	
ototal Points	2a. Calculate average buffer width (select o	ne, do not double check)		
	X WIDE. Buffers average 50m (164ft) or more around wetlar	nd perimeter (7)	
	MEDIUM. Buffers average 25	n to <50m (82 to <164ft) arc	ound wetland perimeter (4)
	NARROW. Buffers average 1	0m to <25m (32ft to <82ft) a	round wetland perimeter	(1)
	VERY NARROW. Buffers ave	rage <10m (<32ft) around w	etland perimeter (0)	
	2b. Intensity of surrounding land use (select	one or double check & ave	rage)	
	X VERY LOW. 2nd growth or ok	ler forest, prairie, savannah,	wildlife area, etc. (7)	
	LOW. Old field (>10 years), st	rubland, young second grow	vth forest. (5)	
		ntial, fenced pasture, park, o	conservation tillage, new f	allow field. (3)
	HIGH. Urban, industrial, open	pasture, row cropping, minir	ng, construction. (1)	
2 16	Metric 3 Hydrology (max 30 nts)	. 3	d Duration inundation/sat	turation
2 10	a Commentation of the commentation of the		(poloot and as double	
otal Points	3a. Sources of Water. Score all that apply.			
	High pH groundwater (5)		X Semi- to perman	nently inundated/saturated (4)
	X Other groundwater (3)		Regularly inunda	ated/saturated (3)
	X Precipitation (1)		Seasonally inune	dated (2)
	Seasonal/Intermittent surface	vater (3)	Seasonally satur	rated in upper 30cm (12in) (1)
	X Perennial surface water (lake o	or stream) (5)		
		3	e. Modifications to natural	hydrologic regime.
	3b. Connectivity. Score all that apply.		(select one or double of	check & average)
	100 year floodplain (1)		None or none a	pparent (12)
	Between stream/lake and othe	r human use (1)	Recovered (7)	
	Part of wetland/upland (e.g. for	est), complex (1)	Recovering (3)	
	X Part of riparian or upland corne	or (1)	X Recent or no re	covery (1)
	3c. Maximum water depth. Select only 1.	Γ.	Check all disturban	ces observed
	>0.7 (27.6in) (3)	[ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)] dike	filling/grading
	X <0.4m (<15.7in) (1)	١٢	tile	road bed/RR track
] weir	dredging
			stormwater input	other-list
			0	
2 <u>10</u>	wetric 4. nabital Alteration and I	vevelopment. (max 2	ν μιο.)	
iolai Points	4a. Substrate disturbance. Score one of de	nune check and average.		
	A invone or none apparent (4)		- Unhitat alteration 0	re one or double sheet and success
	Recovered (3)	40	 mapital alteration. Scol 	re one or double check and averag
	Recovering (2)		None or none a	pparent (9)
	Recent or no recovery (1)		Recovered (6)	
			X Recovering (3)	Active beaver dam
	4b. Habitat development. Select one.		Recent or no rec	covery (1)
	Excellent (7)	<u> </u>		
	Very good (6)	Check all disturbat	nces observed	
	Good (5)		C shruh/	sapling removal
	Moderatoly good (4)			
			L nerbac	Leous/aquatic bed removal
		└ clearcutting		entation
	Poor to fair (2)	selective cutting	L dredgi	ing
		III I I and defeate and the	-I farmin	
	Poor (1)	woody debris remov		'Y
	Poor (1)	toxic pollutants		nt emrichment

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ite: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Atland:	WA-15		Rater:	H. Fogell, A. Davis
2 subtotal firs	t page			
42 0	Metric 5. Special Wetlands. (max 10 pt	is.)		
btotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pis)	estricted bydroio	v (10 ots)	
	l ake Frie coastal/tributary wetland-tes	tricted hydrology	(5 pts)	
	Lake Plain Sand Prairies (Oak Opening	qs) (10 pts)	x- F/	
	Relict Wet Prairies (10 pts)			
	Known occurrence state/federal threat	ened or endange	red species (10)	
	Significant migatory songbird/waterfow	l habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rat	ing. (-10 pts)	
4 12	Metric 6. Plant Communities, interspe	rsion, microt	opography. (max 20 pts	5.)
total Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Sc	
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	2 Emergent	1	Present and either comprises	s small part of wetland's rate quality, or comprises a
	2 Forest		significant part but is of low	v quality
	0 Mudflats		Present and either comprises	significant part of wetland's
	0 Open water	2	vegetation and is of mode	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
	F1		Present and comprises signif	īcant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion	3	vegetation and is of high q	uality
	Select only one	<u></u>		
	High (5)	Narrative	Description of Vegetati	ion Quality
	Moderately high (4)	low	Low spp diversity and/or pred	lominance of nonnative or
	X Moderate (3)		disturbance tolerant native	e species
	Moderately low (2)		Native spp are dominant com	ponent of the vegetation,
	Low (1)		although nonnative and/or	r disturbance tolerant native spp
	None (0)	moderate	moderately high but gene	species diversity moderate to raily w/o presence of rare
	En Coverana efiziaciva planta		threatened or endangered	spp
	Refer to Table 1 ORAM long form for list.			
			and/or disturbance toleran	t native spp absent or virtually
	Add or deduct points for coverage	high	absent, and high spp dive	rsity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threa	atened, or endangered spp
	X Moderate 25-75% cover (-3)			
	Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Class Q	uality
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	5)
	Absent (1)	1	Low 0.1 ha to <1 ha (0.2471	acres to 2.47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9.88 acres)
	6d. Microtopography	<u> </u>	[High 4 ha (9.88 acres) or mor	re
	Score all present using 0 to 3 scale	Microton	granby Cover Seale	
	2 Vegetated hummocks/tussocks	Microtope	graphy Cover Scale	
	2 Coarse woody debrs >15 cm (6")			
	U Standing dead > 25 cm (10") dbh	1	Present very small amounts of marginal quality	or if more common
				but not of high out
		2	resent in moderate amounts	s, but not of highest
			I quality or in small amounts	s of highest quality
			quality or in small amounts	s of highest quality

4 GRAND TOTAL (max 100 pts)

Provisional Wetland Category:

Category 2

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Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Enginee	ring & Consulting		
User Address:	3301 Atlantic Ave,	Raleigh, NC.		
Phone:	919-876-0416	· · · · · · · · · · · · · · · · · · ·		
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-15			
Location of Wetl including addres available	lands ss if See OF	AM Figure in CCNPI	P Wetlands Master Pla	n/USACE IP Application
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.42583/-76.4571	8	Site Visit	✓
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit C	ode	2060006070	3 NWI Map	
Wetland Size (ac	res)	0.8	4 OWI Map	
How was size es	timated?		Aerial Photo	
			Soil Survey	
	Matterde Delinestien/		ODNR - DNAP	
	vvetiands Delineation/	212	Delineation	
			Report/Map	
final score:	54	Provisional Wetland	Category: Category 2	

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

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Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-15		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	✓ NO	🗌 YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)		Tes
6: Bogs	✓ NO	YES
7: Fens	☑ NO	Tes
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands	✓ NO	Tes Tes
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	T YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate	⊡ NO	YES
9e: Non-native Species Predominate	NO NO	✓ YES
10: Oak Openings	⊡ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scoring breakpoints for wetland				
regulatory categories for ORAM 5.0 scores				
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			
54 Category 2				

Table based on FEB 2001 OEPA Standards

Calvert Cl	Ins Nuclear Power Plant		rebruary 22, 2008
lands:	WA-16A	Rater:	H. Fogell, A. Davis
1	Metric 1. Wetland Area (size). (max 6 pts)		
al Points	Select one size class and assign score.		
	25 to <50 acres (10 1 to <20 2ba) (5 pts)		
	10 to <25 acres (4 to <10, 1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 pts)		
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	X 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)		
	<0.1 acres (0.04ha) (0 pts)		
8	Metric 2. Upland buffers and surrounding la	nd use. (max 14 pts)	
al Points	2a. Calculate average buffer width (select one, do not dou	ble check)	
	X WIDE. Buffers average 50m (164ft) or more	around wetland perimeter (7)	
	MEDIUM. Buffers average 25m to <50m (82	to <164tt) around wetland perimeter (4) 5 (1)
	VERY NARROW. Buffers average <10m (<	2ft) around wetland perimeter (0)	(())
	2b. Intensity of surrounding land use (select one or double	check & average)	
	VERY LOW. 2nd growth or older forest, prair	ie, savannah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shrubland, youn	g second growth forest. (5)	
	MODERATELY HIGH. Residential, fenced p	asture, park, conservation tillage, new	fallow field. (3)
		ropping, mining, consuderon. (1)	
19	Metric 3. Hydrology. (max 30 pts)	3d. Duration inundation/sa	aturation.
Points	3a. Sources of Water. Score all that apply.	(select one or double	check & average)
	High pH groundwater (5)	X Semi- to perma	nently inundated/saturated (4)
	X Other groundwater (3)	Regularly inund	lated/saturated (3)
	X Precipitation (1)	Seasonally inur	ndated (2)
	X Seasonal/Intermittent surface water (3)		urated in upper 30cm (12in) (1)
	Perennial surface water (lake of stream) (5)	3e Modifications to nature	al bydrologic regime
	3b Connectivity Score all that apply.	(select one or double	check & average)
	100 year floodplain (1)	None or none a	apparent (12)
	Between stream/lake and other human use (1) X Recovered (7)	
	X Part of wetland/upland (e.g. forest), complex	(1) X Recovering (3)	
	X Part of riparian or upland corridor (1)	Recent or no re	ecovery (1)
	3c. Maximum water depth. Select only 1.	Check all disturbar	nces observed
	>0.7 (27.6in) (3)	ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)	🗌 dike 🛛	filling/grading
	X <0.4m (<15.7in) (1)	tile 🗌	road bed/RR track
		weir _	dredging
		stormwater input	other- list
9.5	Metric 4. Habitat Alteration and Developme	nt. (max 20 pts.)	
Points	4a. Substrate disturbance. Score one or double check an	d average.	
	None or none apparent (4)		
	Recovered (3)	4c. Habitat alteration. Sco	ore one or double check and average
	X Recovering (2)		apparent (9)
	LIRecent of no recovery (1)	X Recovering (3)	
	4b. Habitat development. Select one.	Recent or no re	ecovery (1)
	Excellent (7)		
	Very good (6) Check	all disturbances observed	
	Good (5)	g 🗌 shrut	/sapling removal
	Moderately good (4)	herbz	aceous/aquatic bed removal
	X Fair (3)	itting Sedin	nentation
	Poor to fair (2)	ve cutting	jing
	Poor (1)	debris removal	ing
		ollutants 🗌 nutrie	ent emrichment
_			
subtotal this	page		

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Ite: Calvert C	Cliffs Nuclear Power Plant		Date:	February 21, 2008
Vetland:	WA-16A		Rater:	H. Fogell, A. Davis
.5 subtotal firs	st page			
37.5 0	Metric 5. Special Wetlands. (max 10 pt	s.)		
ubtotal Points	Check all that apply and score as indicated			
	Bog (10 pts)			
	Fen (10 pts)			
	Old Growth Forest (10 pts)			
	Mature forested wetland (5 pts)	anti-interd budrolog	w (10 nto)	
	Lake Erie coastal/tributary wetland-unit	ricted bydrology	(s nte)	
	Lake Elie Coasia/Indulary wetano-rea	ns) (10 nts)	(0 pts)	
	Relict Wet Prairies (10 nts)	go) (10 pto)		
	Known occurrence state/federal threat	ened or endange	red species (10)	
	Significant migatory songbird/waterfow	I habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rati	ng. (-10 pts)	
5.5 8	Metric 6. Plant Communities, intersper	sion, microto	opography. (max 20 pts	s.)
ibtotal Points	6a. Wetland Vegetation Communities			
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover So	ale
	0 Aquatic bed	0	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
	1 Emergent		Present and either comprises	s small part of wetland's
	1 Shrub	1	vegetation and is of mode	erate quality, or comprises a
	2 Forest		significant part but is of iov	w quality
	0 Mudflats		Present and either comprises	s significant part of wetland's
	0 Open water	2	vegetation and is of mode	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
		3	Present and comprises signif	licant part, or more, of wetland's
	6b. Honzontal (plan View) Interspersion	L	regelation and to en high e	1460.05 <u></u>
	High (5)	Narrative	Description of Vegetati	ion Quality
	Moderately bigh (4)		I ow snp diversity and/or prec	lominance of nonnative or
	X Moderate (3)	low	disturbance tolerant native	e species
	Moderately low (2)		Notive one are deminent com	nonont of the vegetation
	Low (1)		although nonnative and/or	r disturbance tolerant native spo
	None (0)	moderate	can also be present, and s	species diversity moderate to
			moderately high, but gene	erally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered	l spp
	Refer to Table 1 ORAM long form for list.		A predominance of native sp	ecies, with nonnative spp
		hiah	and/or disturbance toleran	t native spp absent or virtually
	Add or deduct points for coverage		absent, and high spp dive	rsity and often, but not always,
	Extensive >75 % cover (-5)	L	the presence of fare, the	
	X Moderate 25-75% cover (-3)	88	d Onen Water Class O	
	Sparse 5-25% cover (-1)	Mudtlat ar	to Open water Class Q	
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres	s)
	Absent (1)	1	Low 0.1 hato <1 ha (0.24/1	
	6d Microtopography		High 4 ba (9.88 acres) or more	re
	<u>50. Microtopography</u> Score all present using 0 to 3 scale	`	Thigh 4 ha (5.66 acres) of mo	
	1 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	2 Coarse woody debris >15 cm (6")	0	Absent	<u></u>
	0 Standing dead > 25 cm (10") dbh		Present year small amounts	
	1 Amphibian breeding pools	1	of marginal quality	
			Present in moderate amounts	s but not of highest
		2	quality or in small amounts	s of highest quality
			Present in moderate or great	er amounts

GRAND TOTAL (max 100 pts)

Provisional Wetland Category: Category 2

-	Back	ground Informa	tion Form	
Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Engineerin	g & Consulting		
User Address:	3301 Atlantic Ave, Ra	aleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-16A			
Location of Wet including addres available	lands ss if See ORA	M Figure in CCNPP	Wetlands Master Pl	an/USACE IP Application
			Sources of information used (check all that apply)	n
Lat/Lon or UTM	38.43001/-76.44411		Site Visit	I
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit C	ode	20600060706	NWI Map	
Wetland Size (ac	res)	0.29	OWI Map	
How was size estimated?			Aerial Photo	
			Soil Survey	<u>[7</u>
	Matter de Delinestieu (OIC	、	ODNR - DNAP	
	vvetiands Delineation/Gis)	Delineation Report/Map	
Photograph				
final score:	45.5	Provisional Wetland (Category: Category	2

ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-16A		

1: Critical Habitat	✓ NO	TES YES		
2: Threatened or Endangered Species	V NO	YES		
3: Documented High Quality Wetland	V NO	YES		
4: Significant Breeding or Concentration Area (waterfowl)		YES		
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	Tes		
6: Bogs	NO N	YES		
7: Fens	NO 🗹	YES		
8a: "Old Growth Forest"		YES		
8b: Mature Forested Wetlands		YES		
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES		
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES		
9c: Hydrology unrestricted	✓ NO	YES		
9d: Native Species Predominate		YES		
9e: Non-native Species Predominate		✓ YES		
10: Oak Openings		☐ YES		
11: Relict Wet Prairies	✓ NO	YES		
Table 2. Interim sco	Table 2. Interim scoring breakpoints for wetland			
---	--	--	--	--
regulatory categories for ORAM 5.0 scores				
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			
45.5 Category	2			

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Table based on FEB 2001 OEPA Standards

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ite: Calvert C	litts Nuclear Power Plant		repruary 22, 2008
etlands:	WA-16B	Rater:	H. Fogell, A. Davis
2 2	Metric 1. Wetland Area (size). (max 6 pts)		
ubtotal Points	Select one size class and assign score.		
	>50 acres (>20.2ha) (6 pts)		
	25 to <50 acres (10.1 to <20.2ha) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4 ha) (3 pts)		
	\wedge 0.3 to $<$ 3 acres (0.12 to $<$ 1.2ha) (2pts)		
	<0.1 to <0.3 acres (0.04 to <0.121a) (1 pt)		
10 8	Metric 2. Upland buffers and surrounding lan	d use. (max 14 pts)	
ototal Points	2a. Calculate average buffer width (select one, do not doubl	e check)	
	X WIDE. Buffers average 50m (164ft) or more a	round wetland perimeter (7)	
	MEDIUM. Buffers average 25m to <50m (82 to	o <164ft) around wetland perimeter (4))
	NARROW. Buffers average 10m to <25m (32	ft to <82ft) around wetland perimeter ((1)
	VERY NARROW. Buffers average <10m (<32	ft) around wetland perimeter (0)	
	2b. Intensity of surrounding land use (select one or double c	heck & average)	
	VERY LOW. 2nd growth or older forest, prairie	, savannah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shrubland, young	second growth forest, (5)	
	MODERATELY HIGH. Residential, fenced pas	ture, park, conservation tillage, new fa	allow field. (3)
	X HIGH. Urban, industrial, open pasture, row cro	pping, mining, construction. (1)	
26 16	Metric 3. Hydrology, (max 30 pts)	3d. Duration inundation/sat	uration.
total Points	3a Sources of Mater Score all that apply	(select one or double o	beck & average)
	High pH groundwater (5)	Semi- to perman	ently inundated/saturated (4)
	X Other groundwater (3)	Begularly inunda	ted/saturated (3)
	X Precipitation (1)	X Seasonally inund	lated (2)
	X Seasonal/Intermittent surface water (3)	Seasonally satur	ated in upper 30cm (12in) (1)
	Perennial surface water (lake or stream) (5)		
		3e. Modifications to natural	hydrologic regime.
	3b. Connectivity. Score all that apply.	(select one or double c	heck & average)
	100 year floodplain (1)	None or none ap	oparent (12)
	Between stream/lake and other human use (1)	X Recovered (7)	
	Part of viciarian or upland corridor (1)	Recent or no rec	covery (1)
	3c. Maximum water depth. Select only 1.	Check all disturbance	ces observed
	>0.7 (27.6in) (3)	ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)	dike	filling/grading
	X_<0.4m (<15.7in) (1)	tile	road bed/RR track
		weir 📃	dredging
		stormwater input	other-list
9 13	Metric 4. Habitat Alteration and Developmen	t. (max 20 pts.)	
otal Points	4a. Substrate disturbance. Score one or double check and	average.	
	None or none apparent (4)		
	X Recovered (3)	4c. Habitat alteration. Scor	e one or double check and average.
	Recovering (2)	None or none ap	oparent (9)
	Recent or no recovery (1)	X Recovered (6)	
		Recovering (3)	
	4b. Habitat development. Select one.	Recent or no rec	overy (1)
	Excellent (7)		
	Very good (6) Check al	I disturbances observed	
	Good (5) mowing	shrub/s	sapling removal
	X Moderately good (4)	herbac	eous/aquatic bed removal
	Fair (3)	ing Sedime	entation
	Poor to fair (2)	cutting dredai	ng
	Poor (1)	ebris removal	a
			at emrichment
subtotal this	page		

ORAM v. 5.0 Field Form Quantitative Rating

Site: Calver	Cliffs Nuclear Power Plant	Date:	February 21, 2008	
Wetland:	WA-16B	Rater:	H. Fogell, A. Davis	

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່. ອີ]subtotal firs	st page					
39 0	Metric 5. Special Wetlands, (max 10 p	ots.)				
Subtotal Points	Check all that apply and score as indicated	Check all that apply and score as indicated				
	Bog (10 pts)					
	Fen (10 pts)					
	Old Growth Forest (10 pts)					
	Mature forested wetland (5 pts)					
	Lake Erie coastal/tributary wetland-ur	nrestricted hydrolog	ay (10 pts)			
	Lake Erie coastal/tributary wetland-re	stricted hydrology	(5 pts)			
	Lake Plain Sand Prairies (Oak Openi	ngs) (10 pts)				
	Relict Wet Prairies (10 pts)					
	Known occurrence state/federal threa	atened or endange	red species (10)			
	Significant migatory songbird/waterfor	wl habitat or usage	(10 pts)			
	Category 1 Wetland. See Question 1	l of Qualitative Rati	ing. (-10 pts)			
49 10	Metric 6. Plant Communities, interspe	ersion, microto	opography. (max 20 pts.)			
Subtotal Points	6a. Wetland Vegetation Communities					
	Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale			
	0 Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area			
	0 Emergent		Present and either comprises small part of wetland's			
	1 Shrub	1 '	significant part but is of low quality			
		2	Present and either comprises significant part of wetland's			
	0 Other (list)		part and is of high quality			
			Present and comprises significant part or more of wetland's			
	6h Horizontal (plan view) interspersion	3	vegetation and is of high quality			
	Select only one	L				
	High (5)	Narrative	Description of Vegetation Quality			
•.	Moderately high (4)		Low spp diversity and/or predominance of nonnative or			
	X Moderate (3)	low	disturbance tolerant native species			
	Moderately low (2)		Native sph are dominant component of the vegetation			
	Low (1)		atthough nonnative and/or disturbance tolerant native spp			
	None (0)	moderate	can also be present, and species diversity moderate to			
			moderately high, but generally w/o presence of rare			
	6c. Coverage of invasive plants.		threatened or endangered spp			
	Refer to Table 1 ORAM long form for list.		A predominance of native species, with nonnative spp			
		hiah	and/or disturbance tolerant native spp absent or virtually			
	Add or deduct points for coverage	gii	absent, and high spp diversity and often, but not always,			
	Extensive >75 % cover (-5)	L				
	Moderate 25-75% cover (-3)					
	Sparse 5-25% cover (-1)	Mudflat ar	nd Open Water Class Quality			
	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.2471 acres)			
	X Absent (1)	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)			
		2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)			
	6d. Microtopography	3	High 4 ha (9.88 acres) or more			
	Score all present using 0 to 3 scale					

Microtopography Cover Scale

0	Absent	
1	Present very small amounts or if more common of marginal quality	
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality	
3	Present in moderate or greater amounts and of highest quality	

GRAND TOTAL (max 100 pts)

1 Vegetated hummocks/tussocks

2 Coarse woody debris >15 cm (6")
0 Standing dead > 25 cm (10") dbh
0 Amphibian breeding pools

Provisional Wetland Category: C

Category 2

Background Information Form - ORAM v.5.0

Name: Affiliation: User Address: Phone: e-mail address	H. Fogell, A. Davis MACTEC Engineer 3301 Atlantic Ave, 919-876-0416 akdavis@mactec.com	ing & Consulting Raleigh, NC.	Date:	February 22, 2008
Affiliation: User Address: Phone: e-mail address	MACTEC Engineer 3301 Atlantic Ave, 919-876-0416 akdavis@mactec.com	ing & Consulting Raleigh, NC.		
User Address: Phone: e-mail address	3301 Atlantic Ave, 919-876-0416 akdavis@mactec.com	Raleigh, NC.		
Phone: e-mail address	919-876-0416 akdavis@mactec.com			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-16B			
Location of Wetla including address available	ands sif See OF	AM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Application
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.42938/-76.4433	0	Site Visit	<u></u>
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit Co	ode	20600060706	NWI Map	<u> </u>
Wetland Size (acre	es) 👘	0.36	OWI Map	
How was size est	timated?		Aerial Photo	✓
			Soil Survey	✓
		210	ODNR - DNAP	
	Wetlands Delineation/	315	Delineation Report/Map	7
Photograph				
final score:		Provisional Wetland (Category: Category 2	

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Narrative Rating Questions				
Name:	H. Fogell, A. Davis	Date:	February 22, 2008	
Wetlands Name	WA-16B			

1: Critical Habitat	✓ NO	TES YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	✓ NO	T YES
4: Significant Breeding or Concentration Area (waterfowl)		YES
5: Category 1 Wetlands (hydrologically isolated)		YES
6: Bogs		YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"	✓ NO	YES
8b: Mature Forested Wetlands		Sec. Yes
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	T YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	✓ NO	YES
9c: Hydrology unrestricted	✓ NO	TES
9d: Native Species Predominate	🗌 NO	✓ YES
9e: Non-native Species Predominate	✓ NO	YES
10: Oak Openings	✓ NO	T YES
11: Relict Wet Prairies	⊡ NO	YES

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Table 2. Interim scoring breakpoints for wetlandregulatory categories for ORAM 5.0 scores				
Category	ORAM 5.0 Score			
1	0-29.9			
1 or 2 gray zone	30-34.9			
modified 2	35-44.9			
2	45-59.9			
2 or 3	60-64.9			
3	65-100			

49 Category 2

Table based on FEB 2001 OEPA Standards

ORAM v. 5.0 Field Form Quantitative Rating

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Site: C	Calvert	Cliffs Nuclear Power Plant	Date:	February 22, 2008
Wetlan	ıds:	WA-16C	Rater:	H. Fogell, A. Davis

2 2 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score. 550 acres (>20.2ha) (6 pts)	ax 6 pts)		
	25 to <50 acres (10.1 to <20.2h	a) (5 pts)		
	110 to <25 acres (4 to <10.1ha)	(4 pts)		
	X 0 3 to <3 acres (0 12 to <1 2ba) (2nts)		
	0.01 to < 0.3 acres (0.04 to < 0.12 to < 0.12	ha) (1 pt)		
	<			
4 2	Metric 2. Upland buffers and surr	ounding land use.	(max 14 pts)	
Subtotal Points	2a. Calculate average buffer width (select on	e, do not double check)	<u>l</u>	
	WIDE. Buffers average 50m (1	64ft) or more around we	etland perimeter (7)	
	MEDIUM. Buffers average 25n	n to <50m (82 to <164ft)	around wetland perimeter (4)	
	X NARROW. Buffers average 10	m to <25m (32ft to <82	ft) around wetland perimeter (1)	
	VERY NARROW. Buffers aver	age <10m (<32ft) aroun	d wetland perimeter (0)	
	2b. Intensity of surrounding land use (select	one or double check & a	average)	
	VERY LOW, 2nd growth or old	er forest, prairie, savann	nah, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shr	ubland, young second g	prowth forest. (5)	
	MODERATELY HIGH. Resider	itial, fenced pasture, par	rk, conservation tillage, new fallow field. (3)	
	X HIGH. Urban, industrial, open p	pasture, row cropping, m	nining, construction. (1)	
20 16	Metric 3. Hydrology. (max 30 pts)		3d. Duration inundation/saturation.	
Subtotal Points	3a. Sources of Water. Score all that apply.		(select one or double check & average)	`
	High pH groundwater (5)		X Semi- to permanently inundated/saturated (4)
	X Other groundwater (3)		Regularly inundated/saturated (3)	
	X Precipitation (1)	ater (3)	Seasonally saturated in upper 30cm (12in) (1	D
	Perennial surface water (lake or	stream) (5)		7
			3e. Modifications to natural hydrologic regime.	
(3b, Connectivity. Score all that apply.		(select one or double check & average)	
	100 year floodplain (1)		None or none apparent (12)	
	Between stream/lake and other	human use (1)	Recovered (7)	
	X Part of wetland/upland (e.g. fore	est), complex (1)	Recovering (3)	
		or (1)		
	3c. Maximum water depth. Select only 1.		Check all disturbances observed]
	X >0.7 (27.6in) (3)		ditch 🗌 point source (nonstormwat	er)
	0.4 to 0.7m (15.7 to 27.6in) (2)		dike 🗌 filling/grading	Į
	<0.4m (<15.7in) (1)		tile 🗹 road bed/RR track	
			L weir dredging	
			Stormwater input dist	
23 3	Metric 4. Habitat Alteration and D	evelopment (max	x 20 pts.)	
Subtotal Points	An Substrate disturbance Score one or do	while check and average		
Subtotal Points	None or none apparent (4)			
	Becovered (3)		4c. Habitat alteration. Score one or double check and	average.
	Recovering (2)	:	None or none apparent (9)	
	X Recent or no recovery (1)		Recovered (6)	
			Recovering (3)	
	4b. Habitat development. Select one.		X Recent or no recovery (1)	
	Excellent (7)			
	Very good (6)	Check all distur	bances observed	
	Good (5)	mowing	shrub/sapling removal	
	Moderately good (4)	grazing	herbaceous/aquatic bed removal	
	Fair (3)		sedimentation	
	Poor to fair (2)	selective cutting	✓ dredging	
	X Poor (1)	woody debris ren	noval 🗌 farming	
	······································	toxic pollutants	nutrient emrichment	
		<u> </u>		
23 subtotal this	page			
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te: Calvert C	litts Nuclear Power Plant			February 21, 2008
etland:	WA-16C		Rater:	H. Fogell, A. Davis
3_subtotal first	page			
	Matuia C. Cassial Matianda (may 40 m	to)		
23 0	Metric 5. Special Wetlands. (max 10 p	ts.)		
ototal Points	Check all that apply and score as indicated			
	Old Growth Egrest (10 pts)			
	Mature forested wetland (5 pts)			
	Lake Erie coastal/tributary wetland-un	restricted hydrolog	ıy (10 pts)	
	Lake Erie coastal/tributary wetland-res	stricted hydrology ((5 pts)	
	Lake Plain Sand Prairies (Oak Openir	igs) (10 pts)		
	Relict Wet Prairies (10 pts)			
	Known occurrence state/federal threa	tened or endange	red species (10)	
	Significant migatory songbird/waterfov	vl habitat or usage	(10 pts)	
	Category 1 Wetland. See Question 1	of Qualitative Rati	ng. (-10 pts)	
	Matria 6 Diant Communities interess	mion mionote	nography (may 20 pt	• •
	Metric 6. Plant Communities, interspe	rsion, microte	pograpny. (max zo pe	».j
otal Points	<u>6a. Wetland Vegetation Communities</u>	Vegetatio	n Community Cover So	ale
		vegetation	Absent or comprises <0.1 ha	(0.2471 acres) contiguous area
			Present and either comprises	s small part of wetland's
		1	vegetation and is of mode	erate quality, or comprises a
	0 Forest		significant part but is of low	w quality
	0 Mudfiats		Present and either comprises	s significant part of wetland's
	1 Open water	2	vegetation and is of mode	rate quality or comprises a small
	0 Other (list)		part and is of high quality	
		3	Present and comprises signif	ficant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion	L	vegetation and is of high o	
	Select only one	Norrativo	Departmention of Vocatat	ion Quality
	((High (5)	Narrauve	Description of vegetat	
	Moderately high (4)	low	disturbance tolerant native	
	X Moderately low (2)			
	Low (1)		although nonnative and/or	r disturbance tolerant native spo
	None (0)	moderate	can also be present, and	species diversity moderate to
	L	ļ	moderately high, but gene	rally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered	1 spp
	Refer to Table 1 ORAM long form for list.		A predominance of native sp	ecies, with nonnative spp
		high	and/or disturbance toleran	nt native spp absent or virtually
	Add or deduct points for coverage		the presence of rare threa	rsity and often, but not always, atened or endangered spp
	Extensive >75 % cover (-5)	L		
	X Moderate 25-75% cover (-3)	Mudflat ar	nd Onen Water Class O	huality
	Nearly Absent $\leq 5\%$ cover (0)		Absent <0.1 ha (0.2471 acres	e)
	Absent (1)	1	low 0.1 ha to <1 ha (0.2471	acres to 2 47 acres)
		2	Moderate 1 ha to <4 ha (2.47	acres 9,88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or mo	re
	Score all present using 0 to 3 scale			
	2 Vegetated hummocks/tussocks	Microtopo	graphy Cover Scale	
	2 Coarse woody debris >15 cm (6")	0	Absent	
	0 Standing dead > 25 cm (10") dbh	1	Present very small amounts	or if more common
	1 Amphibian breeding pools		of marginal quality	······
		2	Present in moderate amounts	s, but not of highest
			quality or in small amounts	s of highest quality
		3	Present in moderate or great	er amounts
			and of highest quality	

30 GRAND TOTAL (max 100 pts)

Provisional Wetland Category: 1 or 2 gray zone

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,	Bac	kground Informat	ion Form	
Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Engineeri	ng & Consulting		
User Address:	3301 Atlantic Ave, F	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-16C			
Location of Wetla including address available	inds sif See OR.	AM Figure in CCNPP	Wetlands Master Pla	n/USACE IP Applicati
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.42982/-76.44318	3	Site Visit	v
USGS Quad	Cove Point, MD		USGS Topo	 Image: A set of the set of the
Hydrologic Unit Co	ode	20600060706	NWI Map	
Wetland Size (acre	es)	0.51	OWI Map	
How was size est	imated?		Aerial Photo	7
			Soil Survey	✓
			ODNR - DNAP	
	Wetlands Delineation/G	SIS	Delineation	
			Report/Map	
Photograph				
		-		

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

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Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Wetlands Name	WA-16C			

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	YES
3: Documented High Quality Wetland	✓ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	⊡ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	✓ NO	YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	YES
8a: "Old Growth Forest"		YES
8b: Mature Forested Wetlands	NO I	T YES
9a: Lake Erie Coastal and Tributary Wetlands	✓ NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	V NO	TYES
9c: Hydrology unrestricted		YES
9d: Native Species Predominate	✓ NO	YES
9e: Non-native Species Predominate		✓ YES
10: Oak Openings	✓ NO	YES
11: Relict Wet Prairies	✓ NO	YES

Table 2. Interim scor	Table 2. Interim scoring breakpoints for wetland					
regulatory categorie	s for ORAM 5.0 scores					
Category	ORAM 5.0 Score					
1	0-29.9					
1 or 2 gray zone	30-34.9					
modified 2	35-44.9					
2	45-59.9					
2 or 3	60-64.9					
3	65-100					
30 1 or 2 gray zone						

Table based on FEB 2001 OEPA Standards

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Site: Calvert C	Cliffs Nuclear Power Plant		Date:	February 22, 2008
letlands:	WA-17		Rater:	H. Fogell, A. Davis
2 2 Subtotal Points	Metric 1. Wetland Area (size). (i Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20	max 6 pts) .2ha) (5 pts) a) (4 pts) (3 pts) :ha) (2pts) .12ha) (1 pt)		
16 14 Subtotal Points	Metric 2. Upland buffers and su 2a. Calculate average buffer width (select X WIDE. Buffers average 50m MEDIUM. Buffers average 2 NARROW. Buffers average VERY NARROW. Buffers average	rrounding land use one, do not double check (164ft) or more around w 5m to <50m (82 to <164ft 10m to <25m (32ft to <82 verage <10m (<32ft) arour	(max 14 pts) etland perimeter (7) a around wetland perimeter (4 ft) around wetland perimeter id wetland perimeter (0)	i) (1)
	2b. Intensity of surrounding land use (sele X VERY LOW. 2nd growth or of LOW. Old field (>10 years), MODERATELY HIGH. Resid HIGH. Urban, industrial, ope	tet one or double check & colder forest, prairie, savan shrubland, young second dential, fenced pasture, pa en pasture, row cropping, r	<u>average)</u> nah, wildlife area, etc. (7) growth forest. (5) rk, conservation tillage, new f nining, construction. (1)	fallow field. (3)
38 22 Subtotal Points	Metric 3. Hydrology. (max 30 pt 3a. Sources of Water. Score all that apply High pH groundwater (5) X Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface X Perennial surface water (lake	s) ⁄. e water (3) e or stream) (5)	3d. Duration inundation/sai (select one or double of X Semi- to permar Regularly inunda Seasonally inunda Seasonally satur	turation. check & average) nently inundated/saturated (4) ated/saturated (3) dated (2) rated in upper 30cm (12in) (1)
	3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and oth Part of wetland/upland (e.g. f X Part of riparian or upland con	ner human use (1) iorest), complex (1) ridor (1)	(select one or double of X Recovered (7) Recovering (3)	rryarologie regime. check & average) ipparent (12) icovery (1)
	3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (3) X <0.4m (<15.7in) (1)	2)	Check all disturban	ces observed point source (nonstormwater) filling/grading road bed/RR track dredging other- list
51 13 Subtotal Points	Metric 4. Habitat Alteration and 4a. Substrate disturbance. Score one or None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1)	Development. (ma double check and average	x 20 pts.) 4c. Habitat alteration. Score None or none a X Recovered (6) Recovering (3)	re one or double check and averag pparent (9)
	4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	Check all distur mowing grazing clearcutting selective cutting woody debris re toxic pollutants	Bances observed	covery (1) /sapling removal ceous/aquatic bed removal entation ing ng nt emrichment

51 subtotal this page

ORAM v.	5.0 Field	Form	Quantitative	Rating

Site: Calve	ert Cliffs Nuclear Power Plant	Date:	February 21, 2008
Wetland:	WA-17	Rater:	H. Fogell, A. Davis

1 subtotal first page

Points

51

Subtotal

Metric 5. Special Wetlands. (max 10 pts.)

Check	all	that	apply	ı al	٦đ	score	as	indicated	
	_								

	Bog (10 pts)
	Fen (10 pts)
	Old Growth Forest (10 pts)
	Mature forested wetland (5 pts)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
_	Lake Plain Sand Prairies (Oak Openings) (10 pts)
	Relict Wet Prairies (10 pts)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migatory songbird/waterfowl habitat or usage (10 pts)
	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

62 11 Subtotal Points

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

0

1

2

3

6a. Wetland Vegetation Communities Score all present using 0 to 3 scale

e	e all present using 0 to 3 scale						
	0	Aquatic bed					
I	0	Emergent					
	2	Shrub					
	2	Forest					
	0	Mudflats					
	0	Open water					
	0	Other (list)					

6b. Horizontal (plan view) interspersion



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Absent (1)

Score all present using 0 to 3 scale

6d. Microtopography

0

1

1

Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

Vegetated hummocks/tussocks

Coarse woody debris >15 cm (6")

Standing dead > 25 cm (10") dbh

3 Amphibian breeding pools

X Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Narrative Description of Vegetation Quality

part and is of high quality

vegetation and is of high quality

Vegetation Community Cover Scale

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Absent or comprises <0.1 ha (0.2471 acres) contiguous area

vegetation and is of moderate quality, or comprises a

Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small

Present and comprises significant part, or more, of wetland's

Present and either comprises small part of wetland's

significant part but is of low quality

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

32 GRAND TOTAL (max 100 pts)

Provisional Wetland Category: Category 2 or 3

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	Bac	kground Informa	ation Form	
Name:	H. Fogell, A. Davis		Date:	February 22, 2008
Affiliation:	MACTEC Engineer	ng & Consulting		
User Address:	3301 Atlantic Ave, F	Raleigh, NC.		
Phone:	919-876-0416			
e-mail address	akdavis@mactec.com			
Wetlands Name	WA-17			
Location of Wetl including addres available	ands is if See OR	AM Figure in CCNPI	P Wetlands Master Pla	an/USACE IP Application
			Sources of information used (check all that apply)	
Lat/Lon or UTM	38.42677/-76.45499	9	Site Visit	<u></u>
USGS Quad	Cove Point, MD		USGS Topo	
Hydrologic Unit C	ode	2060006070	6 NWI Map	
Wetland Size (acr	res)	0.	3 OWI Map	
How was size estimated?			Aerial Photo	
			Soil Survey	<u> </u>
	Metlands Delineation/G	as	ODNR - DNAP	
	Wetlands Delineation/GIS		Delineation Report/Map	
Photograph	and the second	- 14 3 A 14 2 \$		
		Devicional Wolfgra		2 or 3

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ORAM v.5.0 Field Form - Narrative Rating

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Narrative Rating Questions

Name:	H. Fogell, A. Davis	Date:	February 22, 2008
Wetlands Name	WA-17		

1: Critical Habitat	✓ NO	YES
2: Threatened or Endangered Species	✓ NO	T YES
3: Documented High Quality Wetland	✓ NO	YES
4: Significant Breeding or Concentration Area (waterfowl)	✓ NO	YES
5: Category 1 Wetlands (hydrologically isolated)	V NO	YES
6: Bogs	✓ NO	YES
7: Fens	✓ NO	Tes Yes
8a: "Old Growth Forest"		YES
8b: Mature Forested Wetlands		T YES
9a: Lake Erie Coastal and Tributary Wetlands	V NO	YES
9b: Hydrology result of Erosion Control Measures (Lake Erie)	V NO	YES
9c: Hydrology unrestricted	✓ NO	YES
9d: Native Species Predominate		✓ YES
9e: Non-native Species Predominate		YES
10: Oak Openings	V NO	YES
11: Relict Wet Prairies	✓ NO	YES

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regulatory categories for ORAM 5.0 scores			
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2 or 3	60-64.9		
3	65-100		
62 Category	2 or 3		

Table based on FEB 2001 OEPA Standards

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