

**From:** <Tony\_Banks@Dom.com>  
**To:** "Jack Cushing" <JXC9@nrc.gov>, <lance.vail@pnl.gov>  
**Date:** Wed, Sep 6, 2006 3:36 PM  
**Subject:** Fw: North Anna ESP Site: Revision to Wetlands Delineation

Jack, Lance -

Attached is a revised wetlands delineation for the North Anna ESP Site that we provided to the US ACE today. An intended confirmation letter from the ACE is expected by September 12, 2006 and I may be able to forward that to you after I receive it.

Please let me know if you have any questions or concerns related to this transmittal.

Thanks.

Tony Banks, MPH, CHMM  
Dominion  
ESP/COL Project  
804/273-2170

(See attached file: 20060906 North Anna Wetland Delineation Revised Submittal.pdf)(See attached file: Revised Comprehensive Delineation for USACE 11 X 17.pdf)

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**CC:** "Nitin Patel" <NXP1@nrc.gov>

**Mail Envelope Properties** (44FF231B.5A4 : 15 : 42404)

**Subject:** Fw: North Anna ESP Site: Revision to Wetlands Delineation  
**Creation Date** Wed, Sep 6, 2006 3:34 PM  
**From:** <Tony\_Banks@Dom.com>

**Created By:** Tony\_Banks@Dom.com

**Recipients**

nrc.gov  
 OWGWPO03.HQGWDO01  
 JXC9 (Jack Cushing)

nrc.gov  
 TWGWPO03.HQGWDO01  
 NXP1 CC (Nitin Patel)

pnl.gov  
 lance.vail

**Post Office**

OWGWPO03.HQGWDO01  
 TWGWPO03.HQGWDO01

**Route**

nrc.gov  
 nrc.gov  
 pnl.gov

| <b>Files</b>  | <b>Size</b> | <b>Date &amp; Time</b>               |
|---|-------------|--------------------------------------|
| MESSAGE   | 1382        | Wednesday, September 6, 2006 3:34 PM |
| 20060906 North Anna Wetland Delineation Revised Submittal.pdf |             | 5067503                              |
| Revised Comprehensive Delineation for USACE 11 X 17.pdf       |             | 53171                                |
| Mime.822  | 1           |                                      |

**Options**

**Expiration Date:** None  
**Priority:** Standard  
**ReplyRequested:** No  
**Return Notification:** None

**Concealed Subject:** No  
**Security:** Standard

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Block List is not enabled

Pamela F. Faggert  
Vice President and Chief Environmental Officer  
5000 Dominion Boulevard, Glen Allen, VA 23060  
Phone: 804-273-3467



**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

September 6, 2006

Regena D. Bronson  
U.S. Army Corps of Engineers  
Potomac Virginia Field Office  
P.O. Box 1704  
Leonardtown, MD 20650

**RE: North Anna Power Station: Follow-up to Site Visit**

Dear Ms. Bronson:

Enclosed, please find the following revisions to our May 24, 2006 request for confirmation of the wetlands delineation of the properties that could be impacted by new construction at our North Anna Power Station:

1. Revised wetland delineation maps showing the locations of the flagged and numbered wetland delineation boundaries.
2. A revised topographic map onto which the delineation survey information has been superimposed.
3. A revised table describing the linear footage of delineated streams (the acreage of wetlands delineated is shown on the Burgess and Niple survey plats).

We are submitting these revisions in light of our discussions with you during your August 1, 2006 visit to the North Anna Power Station.

Thank you for your efforts to date on this project. Please feel free to contact Ken Roller at 804-273-3494 or Tony Banks at 804-273-2179 with any questions or concerns you may have with this transmittal.

Sincerely,

A handwritten signature in cursive script that reads "Pamela F. Faggert".

Pamela F. Faggert

Enclosures

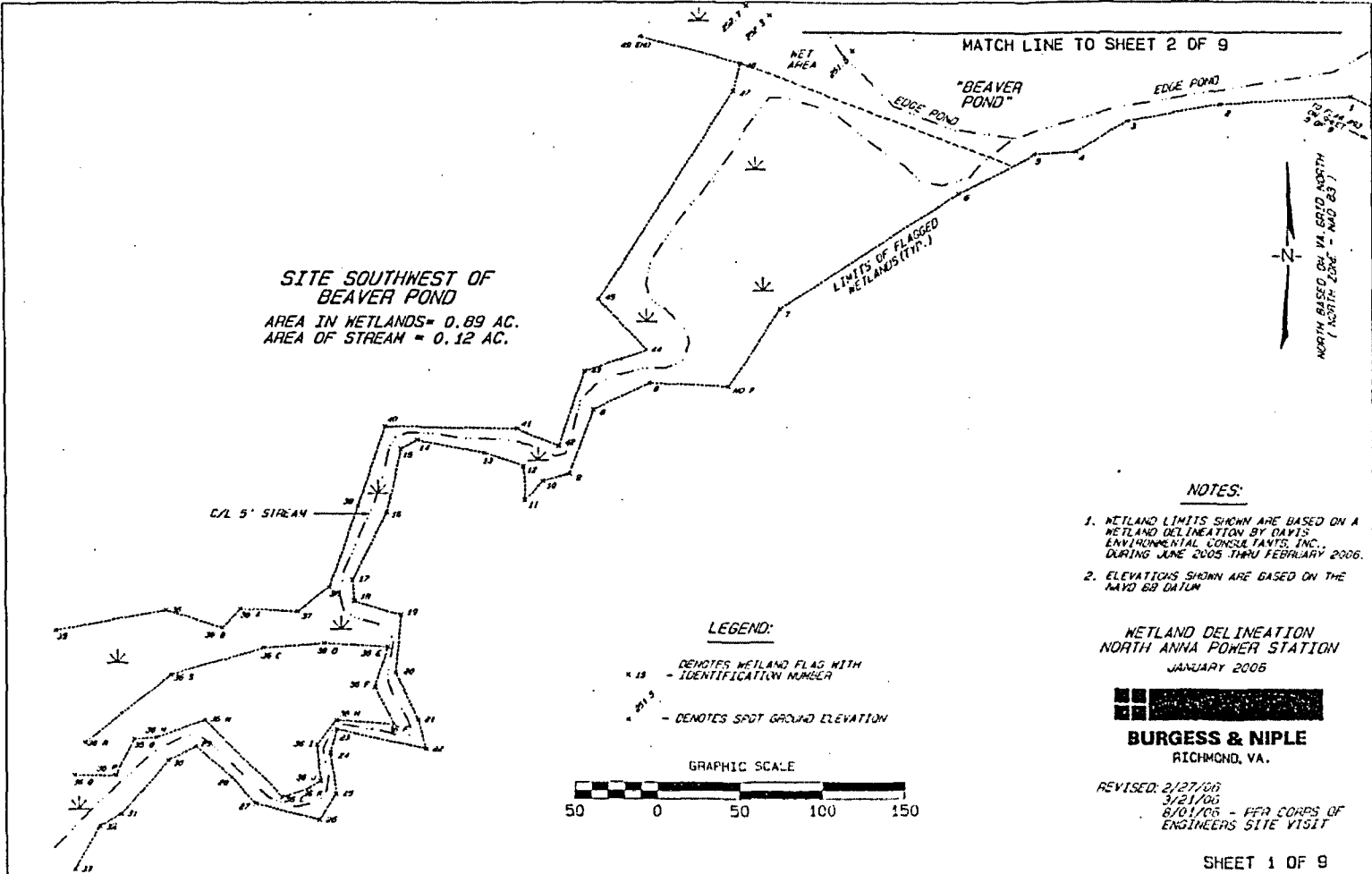
Regena D. Bronson  
September 6, 2006  
Page 2

cc: (with attachments)

Mr. Nitin Patel  
U.S. Nuclear Regulatory Commission  
Washington DC 20555  
Docket No. 52-008

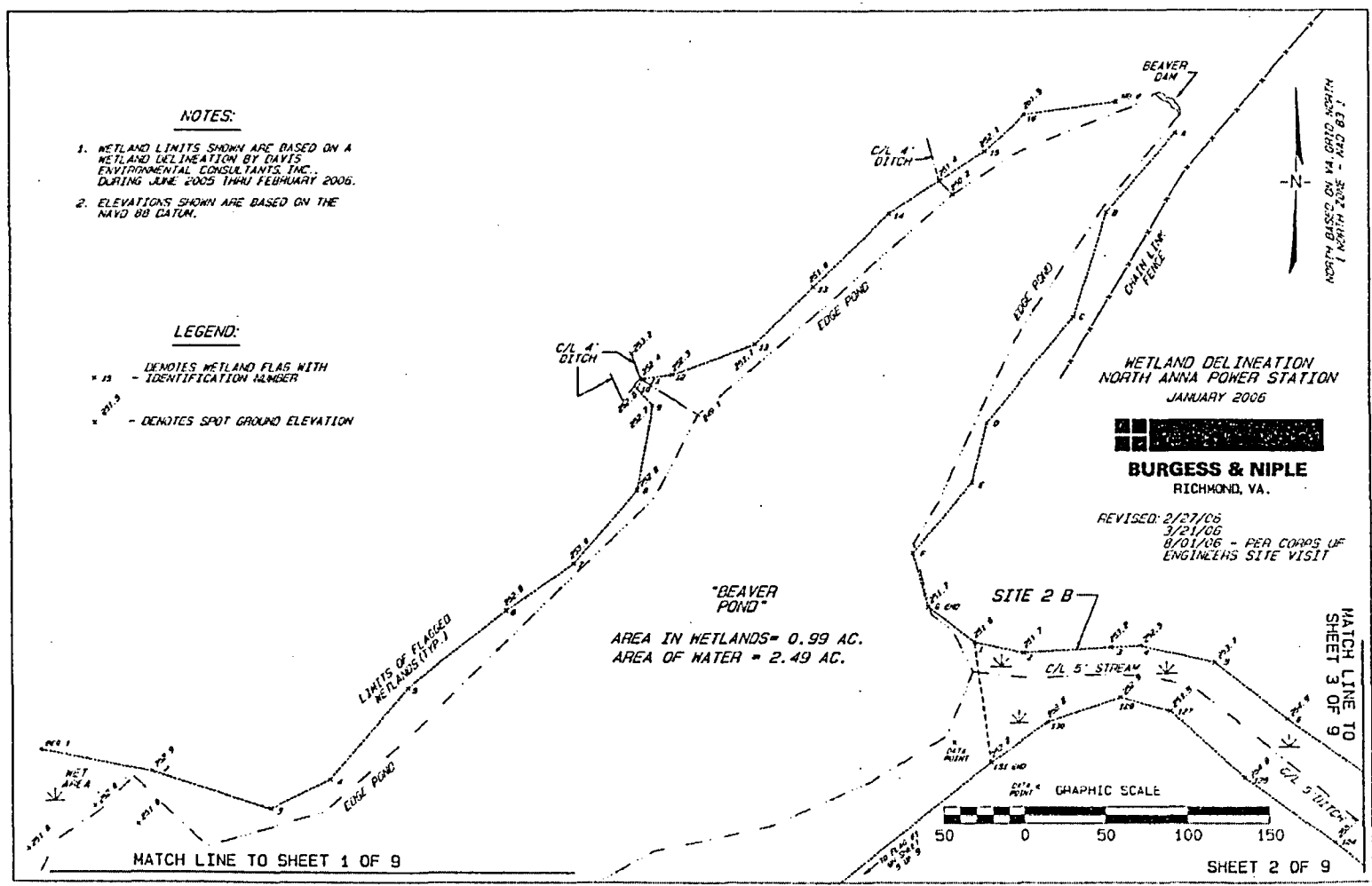
Ms. Joan C. Crowther  
Department of Environmental Quality  
Northern Regional Office  
13901 Crown Court  
Woodbridge, VA 22193



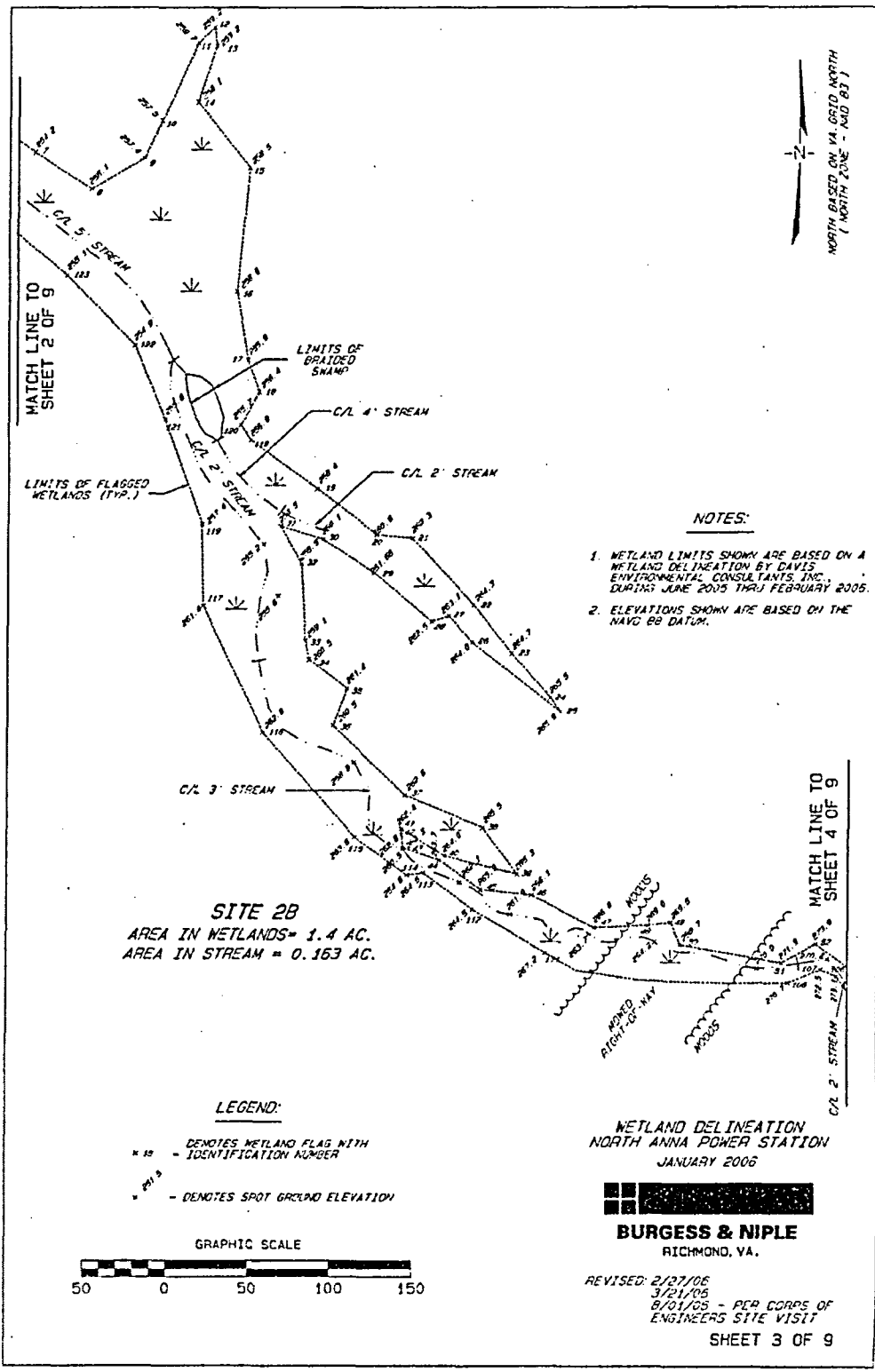


- NOTES:**
1. WETLAND LIMITS SHOWN ARE BASED ON A WETLAND DELINEATION BY DAVIS ENVIRONMENTAL CONSULTANTS, INC., DURING JUNE 2005 THRU FEBRUARY 2006.
  2. ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 DATUM.

- LEGEND:**
- \* 15 - DENOTES WETLAND FLAG WITH IDENTIFICATION NUMBER
  - \* 21.9 - DENOTES SPOT GROUND ELEVATION







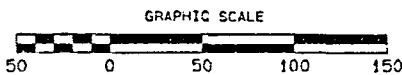
**NOTES:**

- 1. WETLAND LIMITS SHOWN ARE BASED ON A WETLAND DELINEATION BY DAVIS ENVIRONMENTAL CONSULTANTS, INC., DURING JUNE 2005 THRU FEBRUARY 2006.
- 2. ELEVATIONS SHOWN ARE BASED ON THE NAVD 83 DATUM.

**SITE 2B**  
 AREA IN WETLANDS = 1.4 AC.  
 AREA IN STREAM = 0.363 AC.

**LEGEND:**

- x 12 - DENOTES WETLAND FLAG WITH IDENTIFICATION NUMBER
- x 21.5 - DENOTES SPOT GROUND ELEVATION



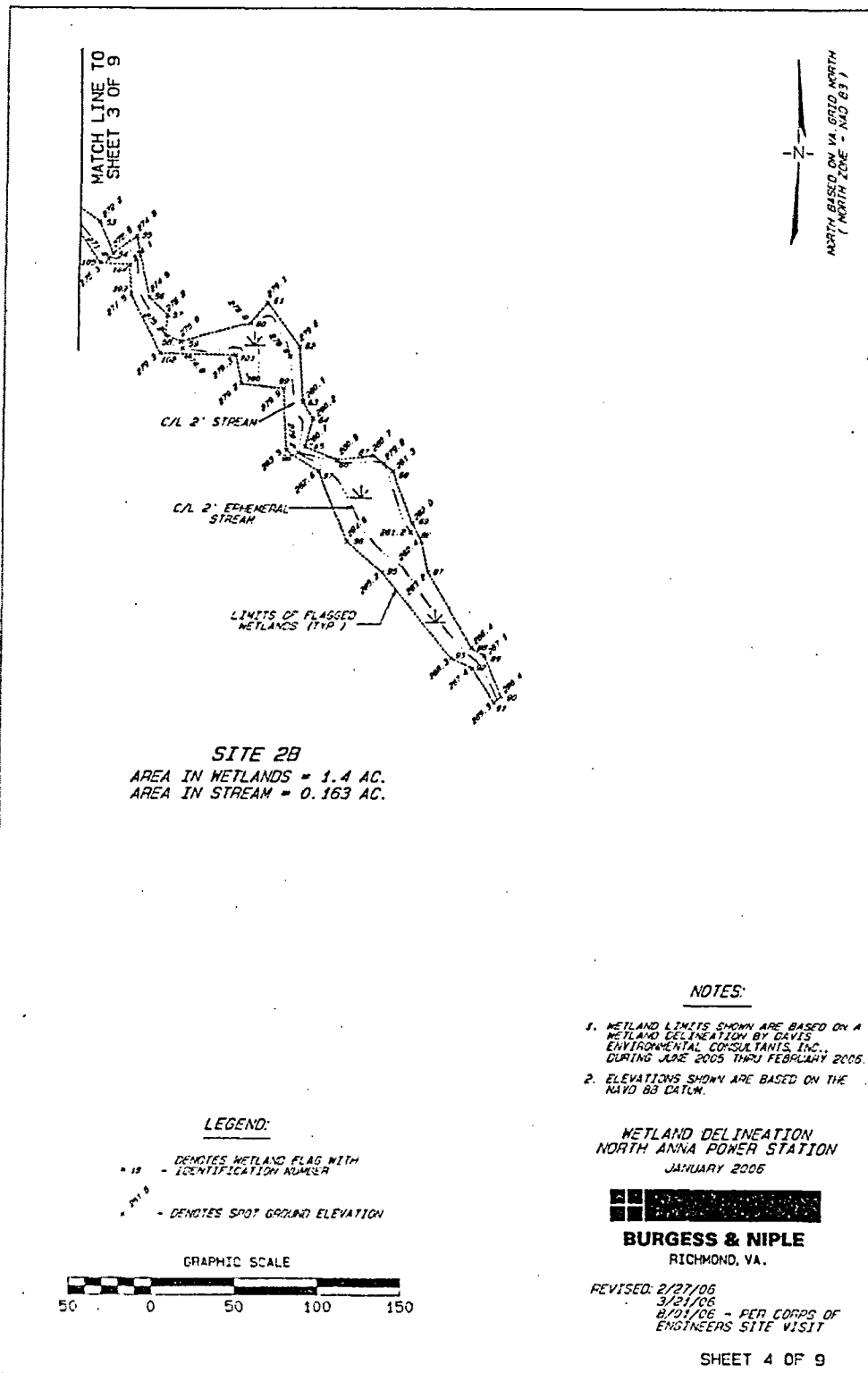
WETLAND DELINEATION  
 NORTH ANNA POWER STATION  
 JANUARY 2006

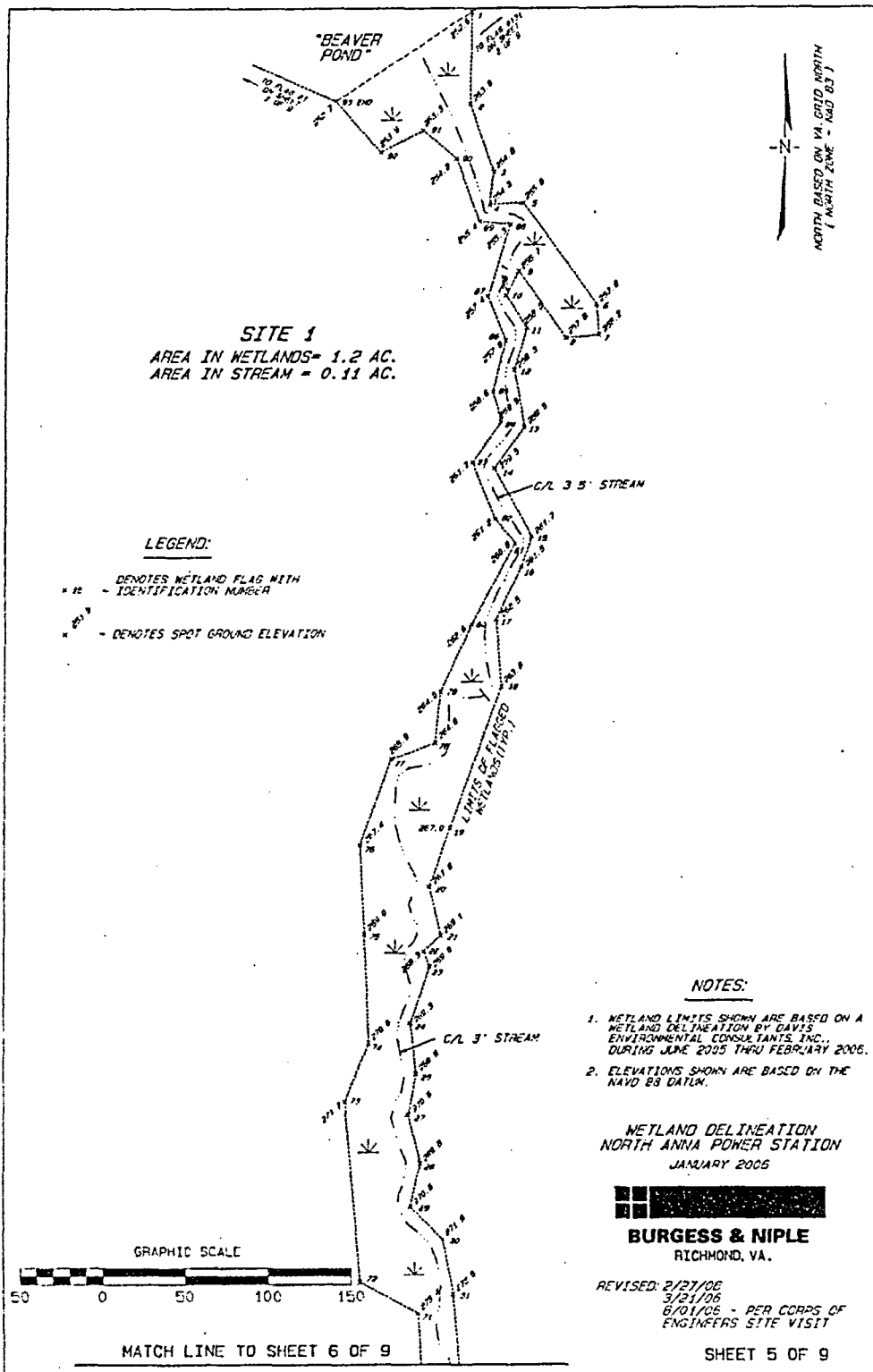


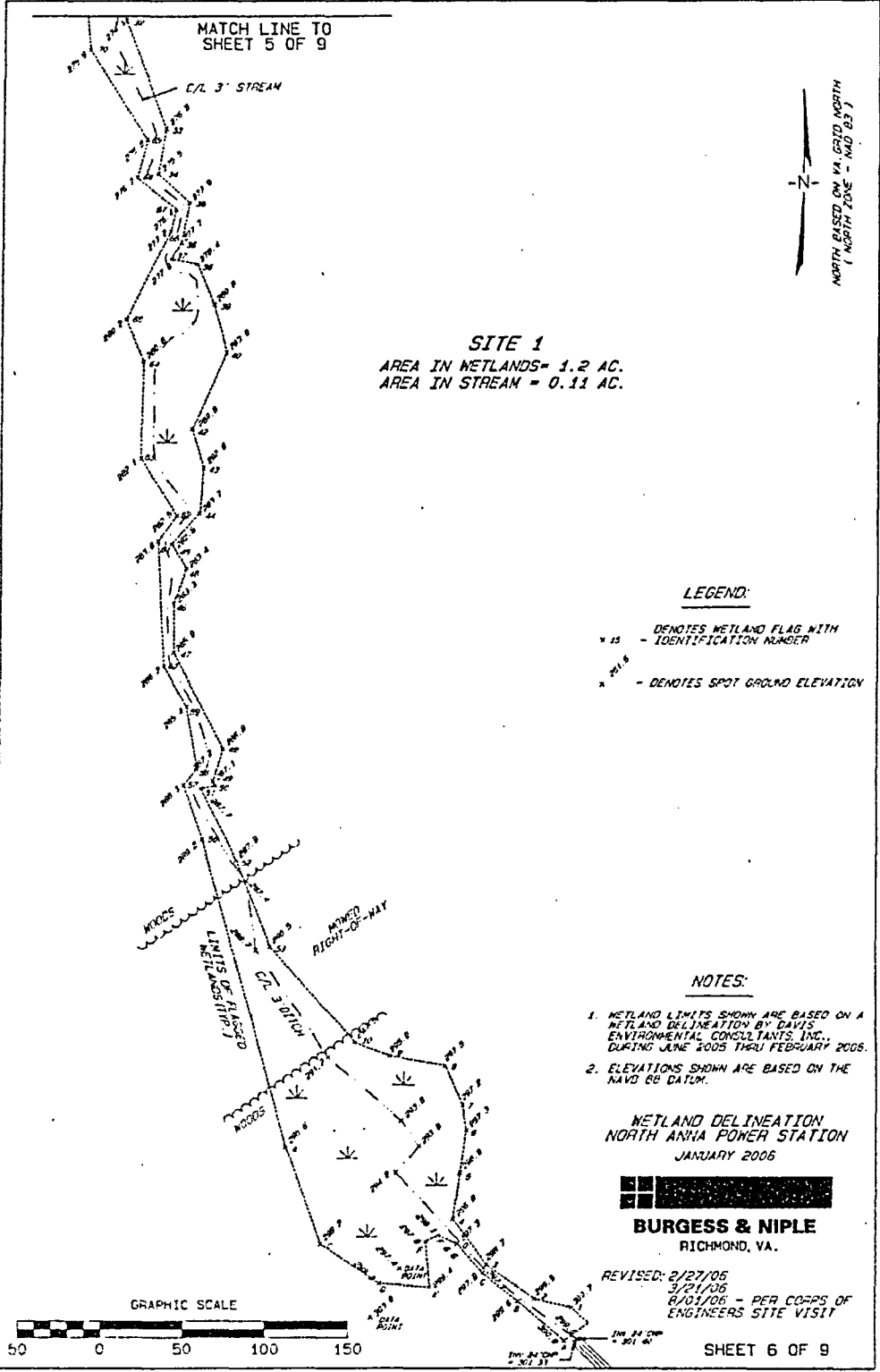
**BURGESS & NIPLE**  
 RICHMOND, VA.

REVISED: 2/27/06  
 3/21/06  
 8/01/05 - PER CORPS OF ENGINEERS SITE VISIT

SHEET 3 OF 9







MATCH LINE TO SHEET 5 OF 9

C/L 3' STREAM

NORTH BASED ON VA GRID NORTH (NORTH ZONE - NAD 83)

**SITE 1**  
AREA IN WETLANDS = 1.2 AC.  
AREA IN STREAM = 0.11 AC.

**LEGEND:**

- ✕ 15 - DENOTES WETLAND FLAG WITH IDENTIFICATION NUMBER
- ✕ 211.8 - DENOTES SPOT GROUND ELEVATION

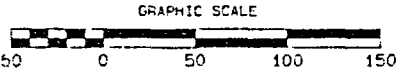
**NOTES:**

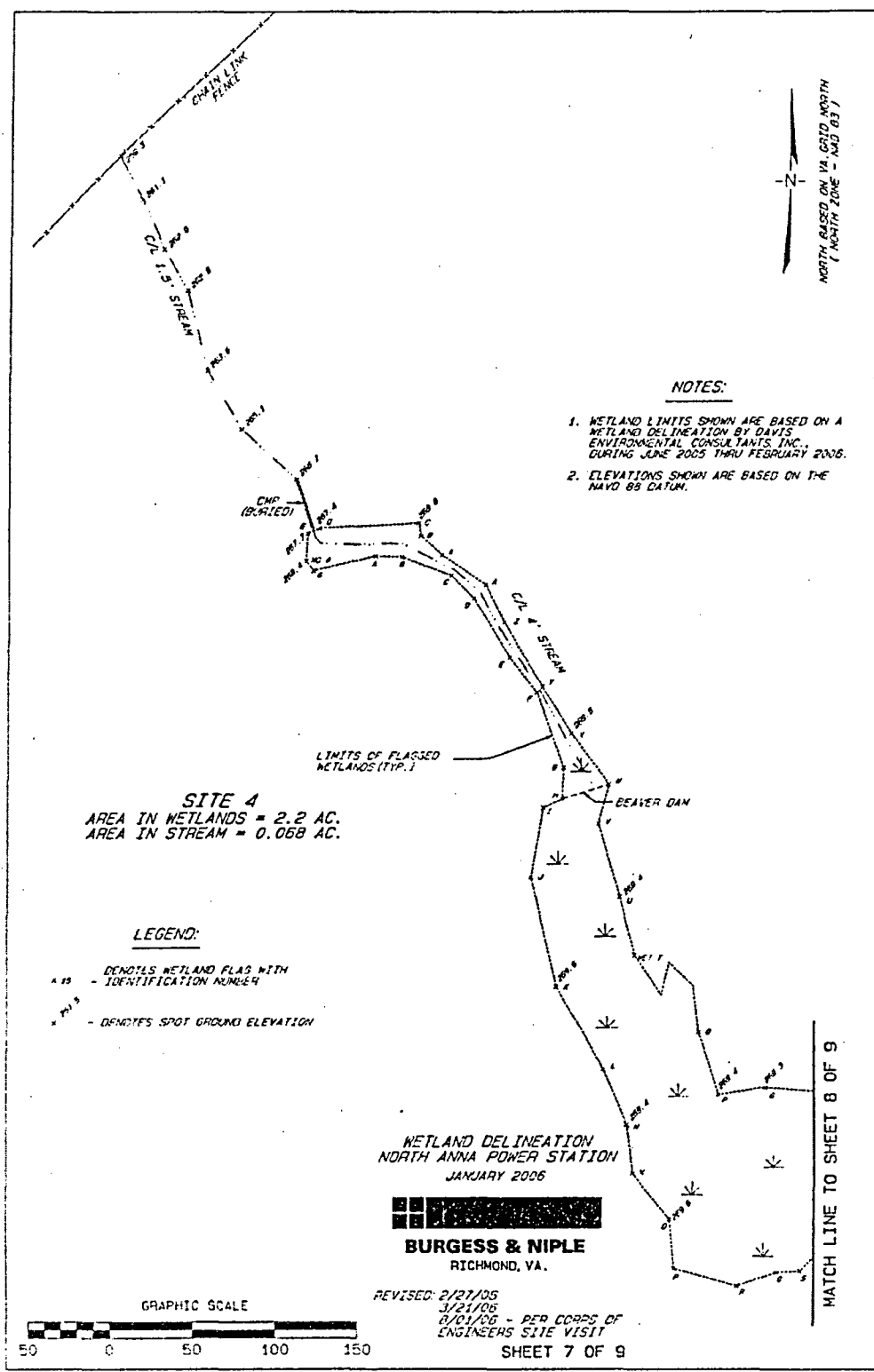
1. WETLAND LIMITS SHOWN ARE BASED ON A WETLAND DELINEATION BY DAVIS ENVIRONMENTAL CONSULTANTS, INC., DURING JUNE 2005 THRU FEBRUARY 2006.
2. ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 DATUM.

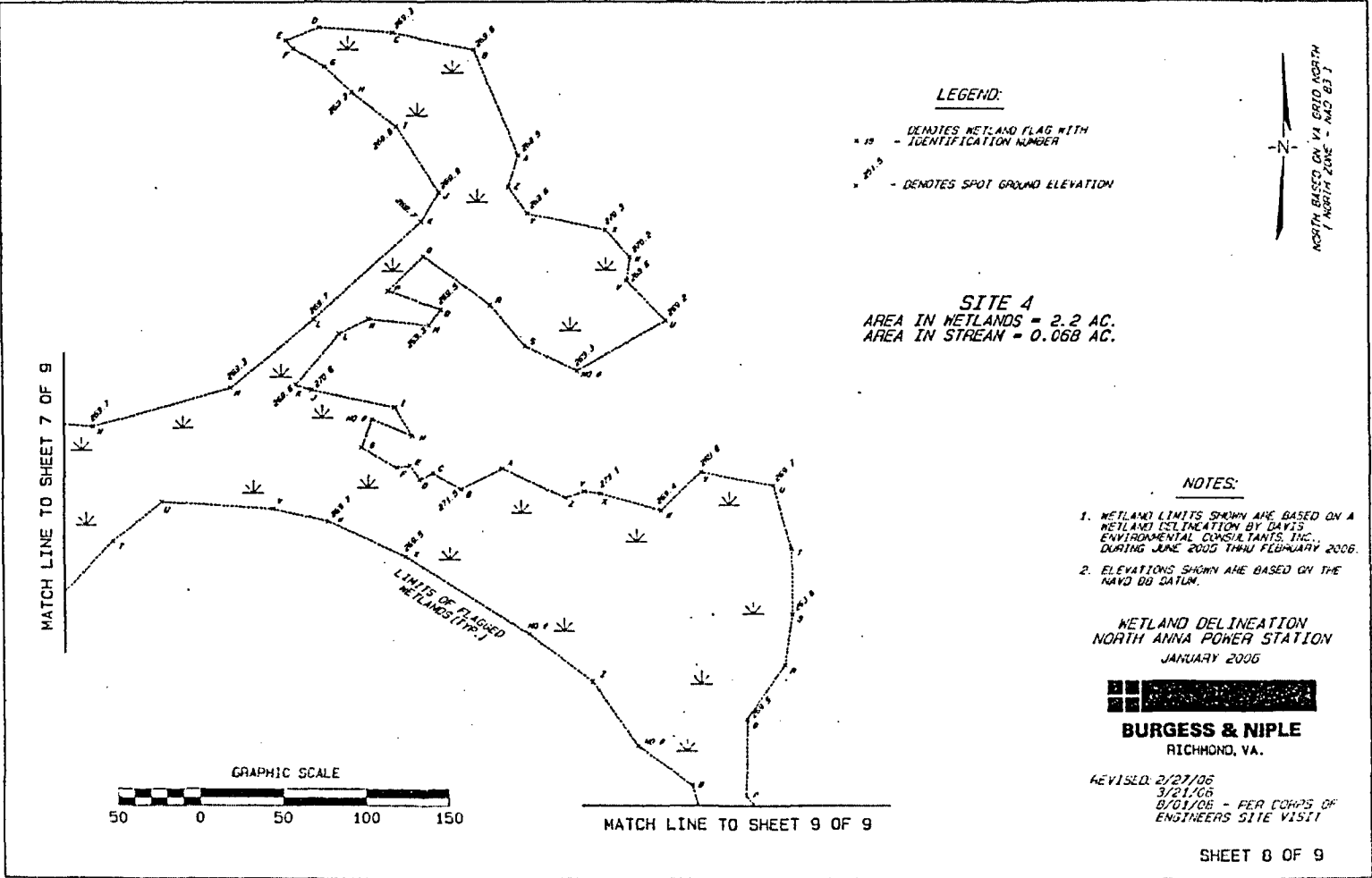
WETLAND DELINEATION  
NORTH ANNA POWER STATION  
JANUARY 2006

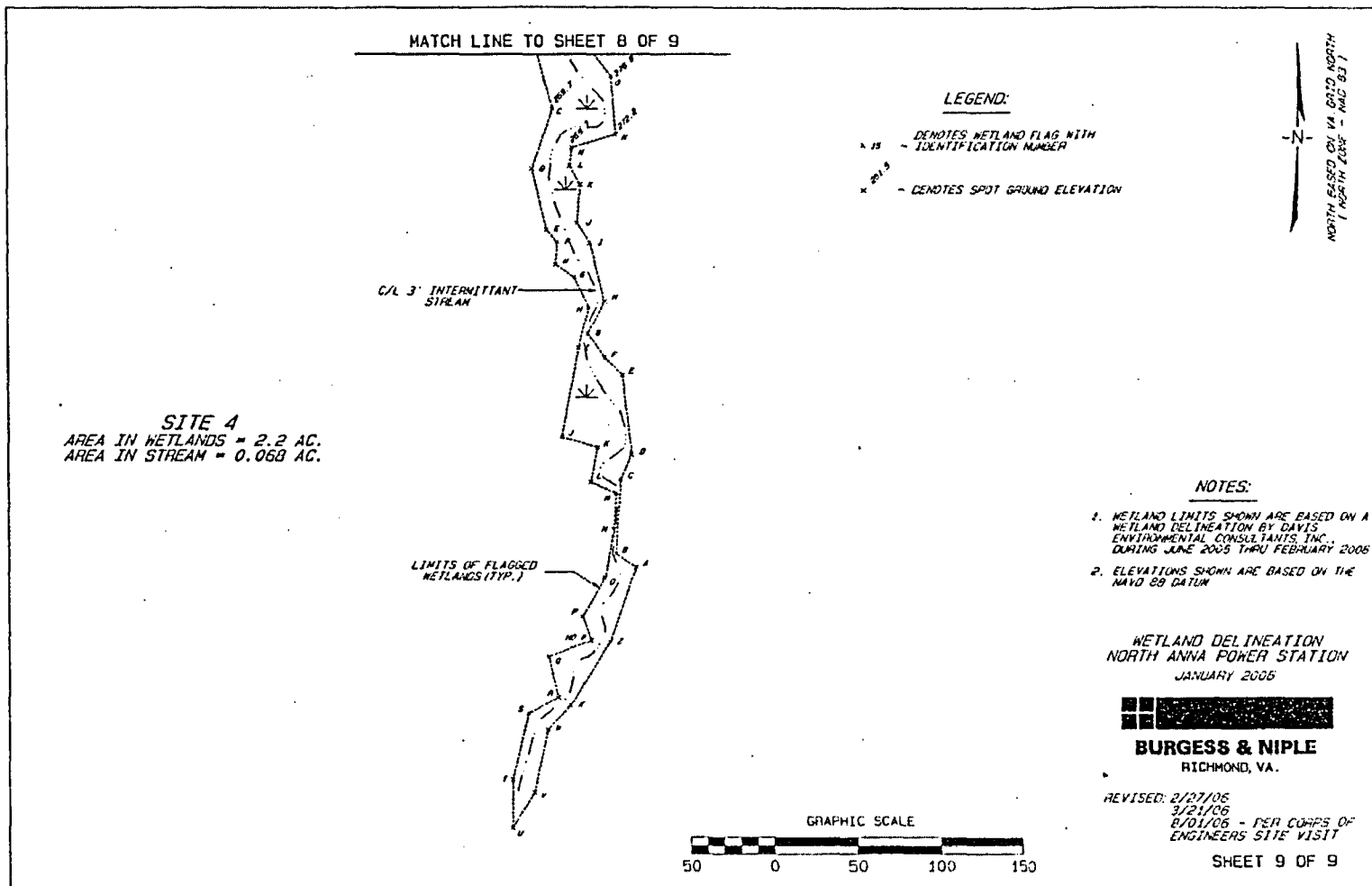
**BURGESS & NIPLE**  
RICHMOND, VA.

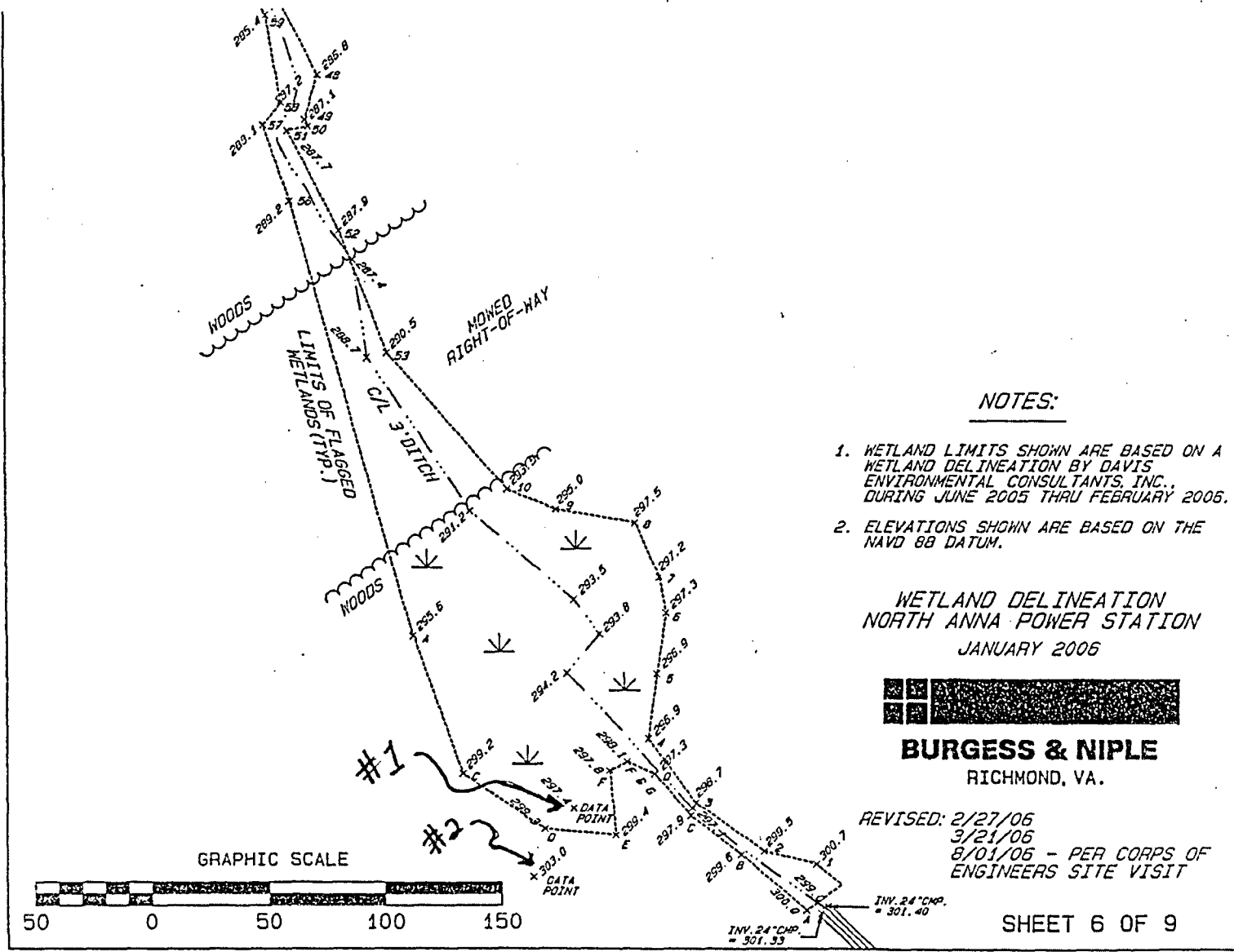
REVISED: 2/27/05  
3/21/06  
8/01/06 - PER CORPS OF ENGINEERS SITE VISIT











**NOTES:**

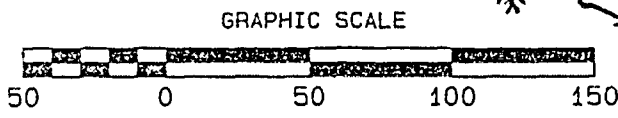
- 1. WETLAND LIMITS SHOWN ARE BASED ON A WETLAND DELINEATION BY DAVIS ENVIRONMENTAL CONSULTANTS, INC., DURING JUNE 2005 THRU FEBRUARY 2006.
- 2. ELEVATIONS SHOWN ARE BASED ON THE NAVD 88 DATUM.

**WETLAND DELINEATION  
NORTH ANNA POWER STATION  
JANUARY 2006**



**BURGESS & NIPLE**  
RICHMOND, VA.

REVISED: 2/27/06  
3/21/06  
8/01/06 - PER CORPS OF  
ENGINEERS SITE VISIT



SHEET 6 OF 9

INV. 24 "CHP.  
= 301.33

INV. 24 "CHP.  
= 301.40





31 May 05 #1

| Trees & Saplings               |        | Trees    | Saplings | VINES                              |        |          |
|--------------------------------|--------|----------|----------|------------------------------------|--------|----------|
| Species                        | Indic. | Presence | Presence | Species                            | Indic. | Presence |
| <i>Acor rubrum</i>             | FAC    | ✓        |          | <i>Berchemia scandens</i>          | FACW   |          |
| <i>Betula nigra</i>            | FACW   |          |          | <i>Bignonia caprofolata</i>        | FAC+   |          |
| <i>Corpinus caroliniana</i>    | FAC    |          |          | <i>Campsis radicans</i>            | FAC    |          |
| <i>Corya ovata</i>             | FACU-  |          |          | <i>Decumaria barbara</i>           | OBL    |          |
| <i>Cottus occidentalis</i>     | FACU   |          |          | <i>Gelsemium sempervirens</i>      | FAC    |          |
| <i>Comus florida</i>           | FACU-  |          |          | <i>Lonchaea japonica</i>           | FAC-   |          |
| <i>Diospyros virginiana</i>    | FAC-   |          |          | <i>Melothria pendula</i>           | FAC    |          |
| <i>Fagus grandifolia</i>       | FACU   |          |          | <i>Mikania scandens</i>            | FACW+  |          |
| <i>Fraxinus pennsylvanica</i>  | FACW   |          |          | <i>Parthenocissus quinquefolia</i> | FACU   |          |
| <i>Ilex opaca</i>              | FACU+  |          |          | <i>Smilax bono-nox</i>             | FACU   |          |
| <i>Liquidambar styraciflua</i> | FAC    |          |          | <i>Smilax glauca</i>               | FACU   |          |
| <i>Liriodendron tulipifera</i> | FACU   |          |          | <i>Smilax laurifolia</i>           | OBL    |          |
| <i>Magnolia grandiflora</i>    | FACU   |          |          | <i>Smilax rotundifolia</i>         | FAC    | ✓        |
| <i>Magnolia virginiana</i>     | FACW+  |          |          | <i>Toxicodendron radicans</i>      | FAC    | ✓        |
| <i>Morus rubra</i>             | FACU   |          |          | <i>Vitis rotundifolia</i>          | FAC-   |          |
| <i>Nyssa sylvatica</i>         | FACW+  | ✓        |          | <i>Wisteria frutescens</i>         | FACW-  |          |
| <i>Ostrya virginiana</i>       | FACU-  |          |          |                                    |        |          |
| <i>Persea borbonia</i>         | FACW   |          |          | HERBACEOUS                         |        |          |
| <i>Pinus serotina</i>          | OBL    |          |          | Species                            | Indic. | Presence |
| <i>Pinus taeda</i>             | FAC-   |          |          | <i>Ambrosia artemisiifolia</i>     | FACU   |          |
| <i>Platanus occidentalis</i>   | FACW-  |          |          | <i>Asarum arifolium</i>            | FACU   |          |
| <i>Populus heterophylla</i>    | FACW+  |          |          | <i>Asparagus officinalis</i>       | FACI   |          |
| <i>Prunus serotina</i>         | FACU   |          |          | <i>Atriplex patula</i>             | FACW   |          |
| <i>Quercus alba</i>            | FACU-  |          |          | <i>Bidens sp</i>                   | OBL    |          |
| <i>Quercus falcata</i>         | FACU-  |          |          | <i>Boehmeria cylindrica</i>        | FACW+  |          |
| <i>Quercus michauxii</i>       | FACW-  |          |          | <i>Chasmanthium laxum</i>          | FAC    |          |
| <i>Quercus nigra</i>           | FAC    |          |          | <i>Chenopodium album</i>           | FACU+  |          |
| <i>Quercus pagodaefolia</i>    | FACW   |          |          | <i>Cirsium arundinaceum</i>        | FACW+  |          |
| <i>Quercus phellos</i>         | FAC+   |          |          | <i>Cyperpedium aculeatum</i>       | FACU   |          |
| <i>Quercus prinus</i>          | UPL    |          |          | <i>Diodia virginiana</i>           | FACW   |          |
| <i>Quercus rubra</i>           | FACU-  |          |          | <i>Duchesnea indica</i>            | FACU-  |          |
| <i>Salix nigra</i>             | FACW+  |          |          | <i>Echinochloa crusgalli</i>       | FAC    |          |
| <i>Sassafras albidum</i>       | FACU-  |          |          | <i>Elychalis obtusa</i>            | OBL    |          |
| <i>Taxodium distichum</i>      | OBL    |          |          | <i>Eupatorium capillifolium</i>    | FACU-  |          |
| <i>Ulmus rubra</i>             | FAC    |          |          | <i>Geranium maculatum</i>          | FACU   |          |
|                                |        |          |          | <i>Glyceria striata</i>            | OBL    |          |
|                                |        |          |          | <i>Impatiens capensis</i>          | FACW   |          |
|                                |        |          |          | <i>Juncus effusus</i>              | FACW+  |          |
|                                |        |          |          | <i>Leersia oryzoides</i>           | OBL    |          |
|                                |        |          |          | <i>Microstegium vimineum</i>       | FAC    |          |
|                                |        |          |          | <i>Milichtha repens</i>            | FACU   |          |
|                                |        |          |          | <i>Phytolacca americana</i>        | FACU+  |          |
|                                |        |          |          | <i>Polygonum arifolium</i>         | OBL    |          |
|                                |        |          |          | <i>Polygonum pennsylvanicum</i>    | FACW   |          |
|                                |        |          |          | <i>Polygonum punctatum</i>         | OBL    |          |
|                                |        |          |          | <i>Polygonum sagittatum</i>        | OBL    |          |
|                                |        |          |          | <i>Polygonum virginianum</i>       | FAC    |          |
|                                |        |          |          | <i>Rhoxia mariana</i>              | FACW+  |          |
|                                |        |          |          | <i>Rubus argutus</i>               | FACU   |          |
|                                |        |          |          | <i>Rubus hispidus</i>              | FACW   |          |
|                                |        |          |          | <i>Rumex acetosella</i>            | UPL    |          |
|                                |        |          |          | <i>Saururus cernuus</i>            | OBL    |          |
|                                |        |          |          | <i>Sorghum halepense</i>           | FACU   |          |
|                                |        |          |          | <i>Tipularia discolor</i>          | FACU   |          |
|                                |        |          |          | <i>Triofolium repens</i>           | FACU-  |          |
|                                |        |          |          | <i>Typha spp</i>                   | OBL    |          |
|                                |        |          |          |                                    |        |          |
|                                |        |          |          | Ferns                              | Indic. | Presence |
|                                |        |          |          | <i>Asplenium platyneuron</i>       | FACU   |          |
|                                |        |          |          | <i>Athyrium filix-femina</i>       | FAC    | ✓        |
|                                |        |          |          | <i>Onoclea sensibilis</i>          | FACW   |          |
|                                |        |          |          | <i>Osmunda cinnamomea</i>          | FACW   |          |
|                                |        |          |          | <i>Osmunda regalis</i>             | OBL    | ✓        |
|                                |        |          |          | <i>Pteridium aquilinum</i>         | FACU   |          |
|                                |        |          |          | <i>Thelypteris noveboracensis</i>  | FAC    |          |
|                                |        |          |          | <i>Thelypteris thelypteroides</i>  | FACW+  |          |
|                                |        |          |          | <i>Woodwardia arifolia</i>         | FACW+  |          |
|                                |        |          |          | <i>Woodwardia virginica</i>        | OBL    |          |
|                                |        |          |          |                                    |        |          |

| SHRUBS                       |            |          |
|------------------------------|------------|----------|
| Species                      | Indic.     | Presence |
| <i>Ainus serrulata</i>       | OBL        |          |
| <i>Aralia spinosa</i>        | FAC        |          |
| <i>Arundinaria gigantea</i>  | FACW       |          |
| <i>Asimina triloba</i>       | FACU+      |          |
| <i>Baccharis halimifolia</i> | FACW       |          |
| <i>Clethra alnifolia</i>     | FAC+       |          |
| <i>Comus amomum</i>          | FACW       | ✓        |
| <i>Euonymus americanus</i>   | FAC        |          |
| <i>Gaylussacia dumosa</i>    | FAC        |          |
| <i>Hamamelis virginiana</i>  | FAC-       |          |
| <i>Ilex glabra</i>           | FACW-      |          |
| <i>Ilex opaca</i>            | FACU+      |          |
| <i>Itea virginica</i>        | OBL        |          |
| <i>Iva frutescens</i>        | FACW+      |          |
| <i>Kalmia angustifolia</i>   | FAC        |          |
| <i>Leucothoe axillaris</i>   | FACW+      |          |
| <i>Leucothoe racemosa</i>    | FACW       |          |
| <i>Ligustrum vulgare</i>     | FACU       |          |
| <i>Lindera benzoin</i>       | FACW-      |          |
| <i>Myrica cerifera</i>       | FAC        |          |
| <i>Rhus copallinum</i>       | NI         |          |
| <i>Rubus argutus</i>         | FACU       |          |
| <i>Sambucus canadensis</i>   | FACW-      |          |
| <i>Symplocos tinctoria</i>   | FAC+       |          |
| <i>Vaccinium corymbosum</i>  | FACW-      |          |
| <i>Viburnum dentatum</i>     | FAC        |          |
| <i>Viburnum nudum</i>        | OBL        |          |
| <b>Rhus vernix</b>           | <b>OBL</b> | <b>✓</b> |

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
 (1987 COE Wetlands Delineation Manual)

|  |                        |
|--|------------------------|
| Project/Site: <u>NORTH ANNA POWER STATION</u>  | Date: <u>31 MAY 05</u> |
| Applicant/Owner: <u>DOMINION VA POWER</u>  | County: <u>LOUISA</u>  |
| Investigator: <u>D.S. DAVIS</u>  | State: <u>VA</u>       |
| Do Normal Circumstances exist on the site? Yes <input checked="" type="radio"/> No <input type="radio"/>                             | Community ID: _____    |
| Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/>              | Transect ID: _____     |
| Is the area a potential Problem Area? (If needed, explain on reverse.) Yes <input type="radio"/> No <input checked="" type="radio"/> | Plot ID: <u>#2</u>     |

**VEGETATION - See other slide**

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-) 27% 3 of 11

Remarks: Meets parameter? NO

**HYDROLOGY**

|   |  |
|---|--|
| Recorded Data (describe in remarks):<br><input type="checkbox"/> Stream, Lake, or Tide Gauge<br><input type="checkbox"/> Aerial Photographs<br><input type="checkbox"/> Other<br><input checked="" type="checkbox"/> No Recorded Data Available | Wetland Hydrology Indicators:<br><b>Primary Indicators:</b><br><input type="checkbox"/> Inundated<br><input type="checkbox"/> Water Marks<br><input type="checkbox"/> Drift Lines<br><input type="checkbox"/> Sediment Deposits<br><input type="checkbox"/> Saturated in Upper 12 inches<br><input type="checkbox"/> Drainage Patterns in Wetlands |
| Field Observation:<br>Depth of Surface Water: _____ (in.)<br>Depth to Free Water: _____ (in.)<br>Depth to Saturated Soil: <u>2.20</u> (in.)   | <b>Secondary Indicators:</b><br><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches<br><input type="checkbox"/> Water-Stained Leaves<br><input type="checkbox"/> Local Soil Survey Data<br><input type="checkbox"/> FAC-Neutral Test<br><input type="checkbox"/> Other (Explain in Remarks)   |
| Remarks: Meets parameter? <u>NO</u><br><p align="center"><u>NO INDICATORS OF WETLAND HYDROLOGY</u></p>  |  |

**SOILS**

Map Unit Name: \_\_\_\_\_  
 (Series & Phase): N/A Drainage Class: N/A

Field Observations  
 Confirmed Mapped Type? Yes No

| Profile Description: |         | Matrix Color    | Mottle Colors   | Mottle             | Texture, Concretions |
|----------------------|---------|-----------------|-----------------|--------------------|----------------------|
| Depth (Inches)       | Horizon | (Munsell Moist) | (Munsell Moist) | Abundance/Contrast | Structure, etc.      |
| <u>10</u>            |         | <u>10YR 4/6</u> |                 |                    | <u>SANDY LOAM</u>    |

Hydric Soil Indicators:  
 Histosol  
 Histic Epipedon  
 Sulfide Odor  
 Aquic Moisture Regime  
 Reducing Conditions  
 Gleyed or Low-Chroma Colors  
 Concretions  
 High Organic Content in Surface Layer in Sandy Soils  
 Organic Streaking in Sandy Soils  
 Listed on Local Hydric Soils List  
 Listed on National Hydric Soils List  
 Other (Explain in Remarks)

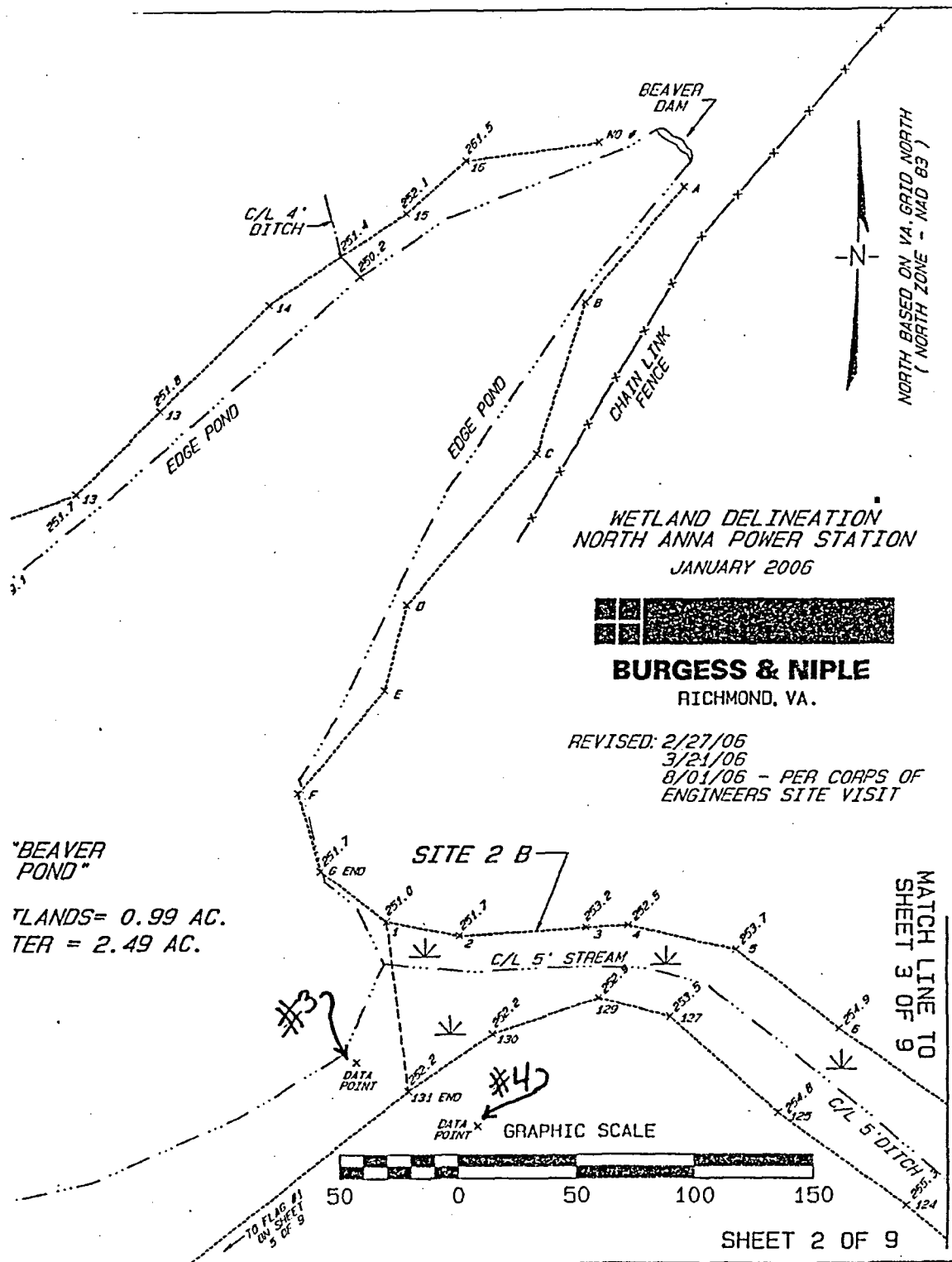
Remarks: Meets parameter? NO  

NOT A HYDRIC SOIL

**WETLAND DETERMINATION**

|  |  |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> (Circle) | Is the Sampling Point Within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle) |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)      |  |
| Hydric Soils Present? Yes <input type="radio"/> No <input checked="" type="radio"/> (Circle)           |  |
| Remarks: Meets parameter? _____<br><p align="center"><u>UNDISTURBED STREAM &amp; VL SITE</u></p>       |  |





**DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Delineation Manual)**

|   |                       |
|---|-----------------------|
| Project/Site: <u>NORTH ANNA POWER STATION</u>   | Date: <u>4 JAN 06</u> |
| Applicant/Owner: <u>DOMINION Va POWER</u>   | County: <u>LOUISA</u> |
| Investigator: <u>D.S. DAVIS</u>   | State: <u>Va</u>      |
| Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No                                | Community ID: _____   |
| Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/>                 | Transect ID: _____    |
| Is the area a potential Problem Area? Yes <input type="radio"/> No <input checked="" type="radio"/><br>(If needed, explain on reverse.) | Plot ID: <u>#3</u>    |

**VEGETATION - See other side**

|   |                          |
|---|--------------------------|
| Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC) | <u>80%</u> <u>4 of 5</u> |
| Remarks: Meets parameter? <u>YES</u>                                  |                          |

**HYDROLOGY**

|   |   |
|---|---|
| Recorded Data (describe in remarks):<br><input type="checkbox"/> Stream, Lake, or Tide Gauge<br><input type="checkbox"/> Aerial Photographs<br><input type="checkbox"/> Other<br><input checked="" type="checkbox"/> No Recorded Data Available | Wetland Hydrology Indicators:<br>Primary Indicators:<br><input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches<br><input type="checkbox"/> Water Marks <input type="checkbox"/> Drainage Patterns in Wetlands<br><input type="checkbox"/> Drift Lines<br><input type="checkbox"/> Sediment Deposits |
| Field Observations:<br>Depth of Surface Water: _____ (in.)<br>Depth to Free Water: _____ (in.)<br>Depth to Saturated Soil: _____ (in.)  | Secondary Indicators:<br><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches<br><input checked="" type="checkbox"/> Water-Stained Leaves<br><input type="checkbox"/> Local Soil Survey Data<br><input checked="" type="checkbox"/> FAC-Neutral Test<br>Other (Explain in Remarks)  |
| Remarks: Meets parameter? <u>YES</u>  |   |

**SOILS**

|  |                            |  |                               |   |                                      |
|--|----------------------------|--|-------------------------------|---|--------------------------------------|
| Map Unit Name<br>(Series & Phase): <u>N/A</u>  | Drainage Class: <u>N/A</u> |  |                               |   |                                      |
| Field Observations<br>Confirmed Mapped Type? Yes No  |                            |  |                               |   |                                      |
| Profile Description:   |                            |  |                               |   |                                      |
| Depth (Inches)   | Horizon                    | Matrix Color (Munsell Moist)   | Mottle Colors (Munsell Moist) | Mottle Abundance/Contrast   | Texture, Concretions Structure, etc. |
| <u>10</u>  |                            | <u>10YR5/1</u>   |                               |   | <u>SANDY ALUVIUM</u>                 |
| Hydric Soil Indicators:  |                            | <input checked="" type="checkbox"/> Reducing Conditions<br><input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors<br><input type="checkbox"/> Concretions |                               | <input type="checkbox"/> Organic Streaking in Sandy Soils<br><input type="checkbox"/> Listed on Local Hydric Soils List<br><input type="checkbox"/> Listed on National Hydric Soils List<br><input type="checkbox"/> Other (Explain in Remarks) |                                      |
| <input type="checkbox"/> Histosol<br><input type="checkbox"/> Histic Epipedon<br><input type="checkbox"/> Sulfide Odor<br><input type="checkbox"/> Aquic Moisture Regime |                            | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils  |                               |   |                                      |
| Remarks: Meets parameter? <u>YES</u>   |                            |  |                               |   |                                      |

**WETLAND DETERMINATION**

|  |   |
|--|---|
| Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No (Circle) | Is the Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No |
| Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No               |   |
| Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No                    |   |
| Remarks: Meets parameter? _____  |   |
| <u>EDGE OF BEAVER POND</u>   |   |



**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
 (1987 COE Wetlands Delineation Manual)

|   |                       |
|---|-----------------------|
| Project/Site: <u>NORTH ANNA POWER STATION</u>   | Date: <u>4 JAN 06</u> |
| Applicant/Owner: <u>DOMINION VA POWER</u>   | County: <u>LOUISA</u> |
| Investigator: <u>D.S. DAVIS</u>   | State: <u>VA</u>      |
| Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No                                | Community ID: _____   |
| Is the site significantly disturbed (Atypical Situation)? Yes <input type="radio"/> No <input checked="" type="radio"/>                 | Transect ID: _____    |
| Is the area a potential Problem Area? Yes <input type="radio"/> No <input checked="" type="radio"/><br>(If needed, explain on reverse.) | Plot ID: <u>#4</u>    |

**VEGETATION - See other side**

|  |            |               |
|--|------------|---------------|
| Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC): | <u>20%</u> | <u>1 OF 5</u> |
| Remarks: Meets parameter? <u>NO</u>                                    |            |               |

**HYDROLOGY**

|  |   |
|--|---|
| Recorded Data (describe in remarks):<br><input type="checkbox"/> Stream, Lake, or Tide Gauge<br><input type="checkbox"/> Aerial Photographs<br><input type="checkbox"/> Other:<br><input checked="" type="checkbox"/> No Recorded Data Available | Wetland Hydrology Indicators:<br>Primary Indicators:<br><input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches<br><input type="checkbox"/> Water Marks <input type="checkbox"/> Drainage Patterns in Wetlands<br><input type="checkbox"/> Drift Lines<br><input type="checkbox"/> Sediment Deposits |
| Field Observation:<br>Depth of Surface Water: _____ (in.)<br>Depth to Free Water: _____ (in.)<br>Depth to Saturated Soils: <u>220</u> (in.)  | Secondary Indicators:<br><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches<br><input type="checkbox"/> Water-Stained Leaves<br><input type="checkbox"/> Local Soil Survey Data<br><input type="checkbox"/> FAC-Neutral Test<br><input type="checkbox"/> Other (Explain in Remarks)                                   |
| Remarks: Meets parameter? <u>NO</u>  |   |

**SOILS**

|  |   |   |                               |
|--|---|---|-------------------------------|
| Map Unit Name                                  |   | Drainage Class: <u>N/A</u>                                    |                               |
| Series & Phase: <u>N/A</u>                     |   | Field Observations<br>Confirmed Mapped Type? Yes No           |                               |
| <b>Profile Description:</b>                    |   |   |                               |
| Depth (inches)                                 | Horizon   | Matrix Color (Munsell Moist)                                  | Mottle Colors (Munsell Moist) |
| <u>10</u>                                      |   | <u>10YR 5/4</u>   |                               |
|  |   |   |                               |
|  |   |   |                               |
| Hydric Soil Indicators:                        |   | Organic Stratification in Sandy Soils                         |                               |
| <input type="checkbox"/> Histosol              | <input type="checkbox"/> Reducing Conditions                                  | <input type="checkbox"/> Listed on Local Hydric Soils List    |                               |
| <input type="checkbox"/> Illitic Epipedon      | <input type="checkbox"/> Gleyed or Low-Chroma Colors                          | <input type="checkbox"/> Listed on National Hydric Soils List |                               |
| <input type="checkbox"/> Sulfide Odor          | <input type="checkbox"/> Concretions  | <input type="checkbox"/> Other (Explain in Remarks)           |                               |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |   |                               |
| Remarks: Meets parameter? <u>NO</u>            |   |   |                               |

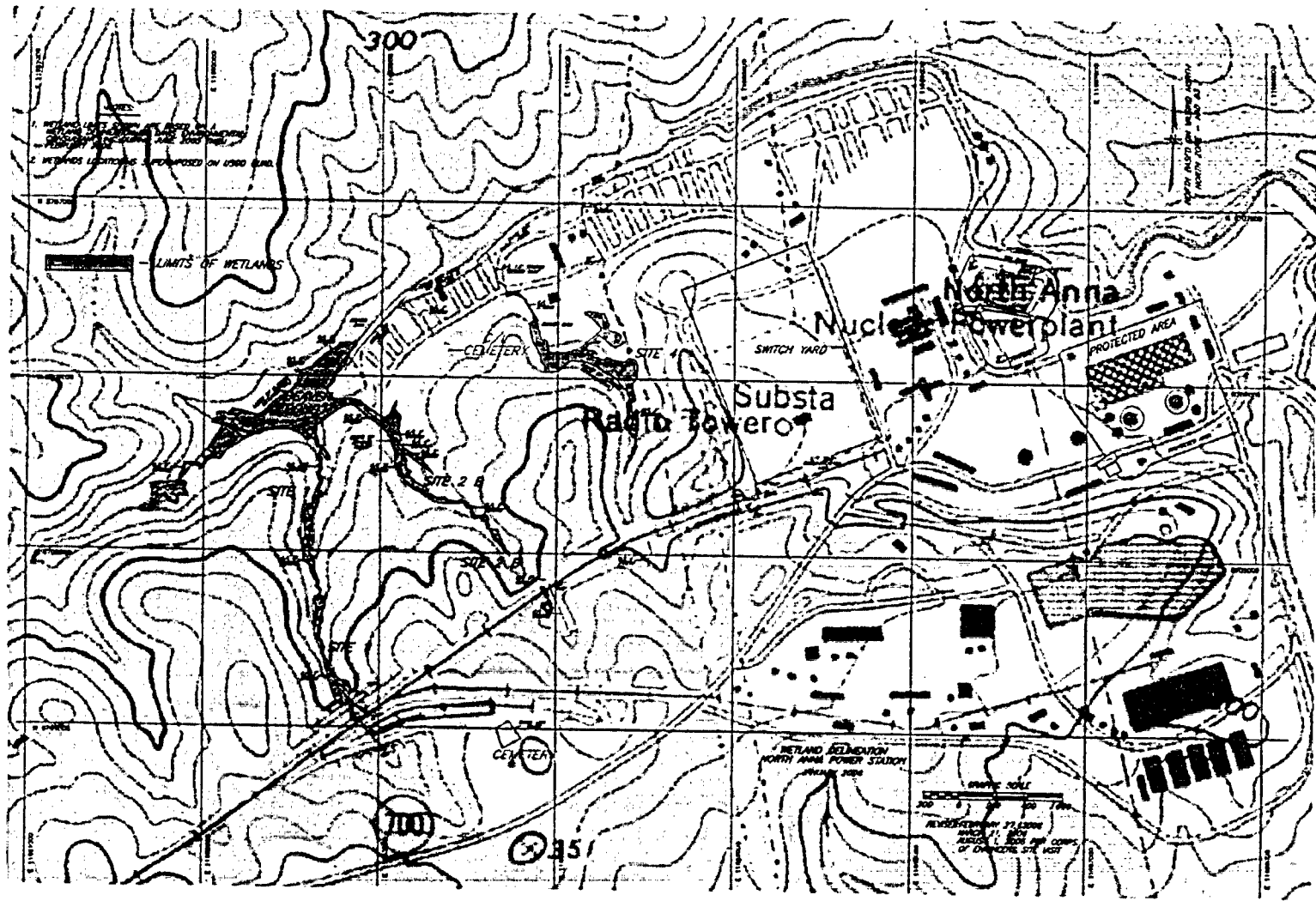
**WETLAND DETERMINATION**

|  |   |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> (Circle) | (Circle)  |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>               | Is the Sampling Point Within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soils Present? Yes <input checked="" type="radio"/> No <input type="radio"/>                    |   |
| Remarks: Meets parameter? _____  |   |
| <u>SITE IS ON HILLSIDE NEXT TO BEAVER POND</u>   |   |



4 Jan 06 #4

| <u>Trees &amp; Saplings</u> |               | <u>Trees</u>    | <u>Saplings</u> | <u>VINES</u>                |               |                 |
|-----------------------------|---------------|-----------------|-----------------|-----------------------------|---------------|-----------------|
| <u>Species</u>              | <u>Indic.</u> | <u>Presence</u> | <u>Presence</u> | <u>Species</u>              | <u>Indic.</u> | <u>Presence</u> |
| Acer rubrum                 | FAC           | _____           | _____           | Borchemia scandens          | FACW          | _____           |
| Batula nigra                | FACW          | _____           | _____           | Bignonia capreolata         | FAC+          | _____           |
| Carpinus caroliniana        | FAC           | _____           | _____           | Campsis radicans            | FAC           | _____           |
| Carya ovata                 | FACU-         | _____           | _____           | Documaria barbara           | OBL           | _____           |
| Coffea occidentalis         | FACU          | _____           | _____           | Gotseium sempervirens       | FAC           | _____           |
| Cornus florida              | FACU-         | _____           | _____           | Lonicera Japonica           | FAC-          | _____           |
| Diospyros virginiana        | FAC-          | _____           | _____           | Molothria pendula           | FAC           | _____           |
| Fagus grandifolia           | FACU          | _____           | _____           | Mikania scandens            | FACW+         | _____           |
| Fraxinus pennsylvanica      | FACW          | _____           | _____           | Parthenocissus quinquefolia | FACU          | _____           |
| Ilex opaca                  | FACU+         | _____           | _____           | Simulax bono-nox            | FACU          | _____           |
| Liquidambar styraciflua     | FAC           | _____           | _____           | Simulax glauca              | FACU          | _____           |
| Liliodendron tulipifera     | FACU          | _____           | _____           | Simulax laurifolia          | OBL           | _____           |
| Magnolia grandiflora        | FACU          | _____           | _____           | Simulax rotundifolia        | FAC           | _____           |
| Magnolia virginiana         | FACW+         | _____           | _____           | Toxicodendron radicans      | FAC           | _____           |
| Morus rubra                 | FACU          | _____           | _____           | Vitis rotundifolia          | FAC-          | _____           |
| Myrica sylvatica            | FACW+         | _____           | _____           | Wisteria frutescens         | FACW-         | _____           |
| Ostrya virginiana           | FACU-         | _____           | _____           |                             |               |                 |
| Persia borbonica            | FACW          | _____           | _____           | <u>HERBACEOUS</u>           |               |                 |
| Pinus serotina              | OBL           | _____           | _____           | <u>Species</u>              | <u>Indic.</u> | <u>Presence</u> |
| Pinus taeda                 | FAC-          | _____           | _____           | Ambrosia artemisiifolia     | FACU          | _____           |
| Platanus occidentalis       | FACW-         | _____           | _____           | Asarum arifolium            | FACU          | _____           |
| Populus heterophylla        | FACW+         | _____           | _____           | Asparagus officinalis       | FACI          | _____           |
| Prunus serotina             | FACU          | _____           | _____           | Atriplex patula             | FACW          | _____           |
| Quercus alba                | FACU-         | _____           | _____           | Bidens sp                   | OBL           | _____           |
| Quercus falcata             | FACU-         | _____           | _____           | Boehmeria cylindrica        | FACW+         | _____           |
| Quercus michauxii           | FACW          | _____           | _____           | Chasmanthium laxum          | FAC           | _____           |
| Quercus nigra               | FAC           | _____           | _____           | Chenopodium album           | FACU+         | _____           |
| Quercus pagodaefolia        | FACW          | _____           | _____           | Cinna arundinacea           | FACW+         | _____           |
| Quercus phellos             | FAC+          | _____           | _____           | Cyrtopodium acaule          | FACU          | _____           |
| Quercus prinus              | UPL           | _____           | _____           | Diodia virginiana           | FACW          | _____           |
| Quercus rubra               | FACU-         | _____           | _____           | Duchesnea indica            | FACU-         | _____           |
| Saxx nigra                  | FACW+         | _____           | _____           | Echinochloa crusgalli       | FAC           | _____           |
| Sassafras albidum           | FACU-         | _____           | _____           | Elocharis obtusa            | OBL           | _____           |
| Taxodium distichum          | OBL           | _____           | _____           | Eupatorium capillifolium    | FACU-         | _____           |
| Ulmus rubra                 | FAC           | _____           | _____           | Geranium maculatum          | FACU          | _____           |
|                             |               |                 |                 | Glyceria striata            | OBL           | _____           |
| <u>SHRUBS</u>               |               |                 |                 | Impatiens capensis          | FACW          | _____           |
| <u>Species</u>              | <u>Indic.</u> | <u>Presence</u> |                 | Juncus effusus              | FACW+         | _____           |
| Alnus serrulata             | OBL           | _____           |                 | Leersia oryzoides           | OBL           | _____           |
| Aralia spinosa              | FAC           | _____           |                 | Microstegium vimineus       | FAC           | _____           |
| Arundinaria gigantea        | FACW          | _____           |                 | Mitella repens              | FACU          | _____           |
| Asimina triloba             | FACU+         | _____           |                 | Phytolacca americana        | FACU+         | _____           |
| Baccharis heliophilla       | FACW          | _____           |                 | Polygonum arifolium         | OBL           | _____           |
| Clethra alnifolia           | FAC+          | _____           |                 | Polygonum pennsylvanicum    | FACW          | _____           |
| Cornus amomum               | FACW          | _____           |                 | Polygonum punctatum         | OBL           | _____           |
| Euonymus americanus         | FAC           | _____           |                 | Polygonum sagittatum        | OBL           | _____           |
| Gaylussacia dumosa          | FAC           | _____           |                 | Polygonum virginianum       | FAC           | _____           |
| Hamamelis virginiana        | FAC-          | _____           |                 | Rhexia mariana              | FACW+         | _____           |
| Ilex glabra                 | FACW-         | _____           |                 | Rubus argutus               | FACU          | _____           |
| Ilex opaca                  | FACU+         | _____           |                 | Rubus hispidus              | FACW          | _____           |
| Itea virginica              | OBL           | _____           |                 | Rumex acetosella            | UPL           | _____           |
| Iva frutescens              | FACW+         | _____           |                 | Saururus cernuus            | OBL           | _____           |
| Kalmia angustifolia         | FAC           | _____           |                 | Sorghum halepense           | FACU          | _____           |
| Leucothoe axillaris         | FACW+         | _____           |                 | Tipularia discolor          | FACU          | _____           |
| Leucothoe racemosa          | FACW          | _____           |                 | Trifolium repens            | FACU-         | _____           |
| Ligustrum vulgare           | FACU          | _____           |                 | Typha spp                   | OBL           | _____           |
| Lindera benzoin             | FACW-         | _____           |                 | <u>CHIMAPHILA</u>           | <u>UPL</u>    | _____           |
| Myrica cerifera             | FAC           | _____           |                 | <u>MACULATA</u>             |               | _____           |
| Rhus copallinum             | NI            | _____           |                 |                             |               |                 |
| Rubus argutus               | FACU          | _____           |                 | <u>Ferns</u>                |               |                 |
| Sambucus canadensis         | FACW-         | _____           |                 | Asplenium platyneuron       | FACU          | _____           |
| Symplocos tinctoria         | FAC+          | _____           |                 | Athyrium filix-femina       | FAC           | _____           |
| Vaccinium corymbosum        | FACW-         | _____           |                 | Onoclea sensibilis          | FACW          | _____           |
| Viburnum dentatum           | FAC           | _____           |                 | Osmunda chinamomea          | FACW          | _____           |
| Viburnum nudum              | OBL           | _____           |                 | Osmunda regalis             | OBL           | _____           |
|                             |               |                 |                 | Pteridium aquilinum         | FACU          | _____           |
|                             |               |                 |                 | Thelypteris noveboracensis  | FAC           | _____           |
|                             |               |                 |                 | Thelypteris thelypteroides  | FACW+         | _____           |
|                             |               |                 |                 | Woodwardia arcolata         | FACW+         | _____           |
|                             |               |                 |                 | Woodwardia virginica        | OBL           | _____           |



**NORTH ANNA POWER STATION  
LINEAR FOOTAGE OF STREAMS WITHIN THE DELINEATED WETLANDS**

| <u>SITE DESCRIPTION</u>                 | <u>FOOTAGE OF STREAM</u> |
|---|--------------------------|
| <b>SW of Beaver Pond</b>                |                          |
| 5' Stream - SW of Beaver pond           | 1082.5'                  |
| <b>Site 1</b>                           |                          |
| 3.5' Stream - Site 1                    | 442.0'                   |
| 3' Stream - Site 1                      | 1436.1'                  |
| <b>Site 2B</b>                          |                          |
| 2' Ephemeral Stream - Site 2B           | 294.0'                   |
| 2' Stream - Site 2B, East of mowed R/W  | 339.7'                   |
| 3' Stream - Site 2B                     | 426.0'                   |
| 2' Streams - Site 2B, West of mowed R/W | 244.9'                   |
| 4' Stream - Site 2B                     | 59.3'                    |
| 5' Stream - Site 2B                     | 402.4'                   |
| <b>Site 4</b>                           |                          |
| 4' Stream - Site 4                      | 252.4'                   |
| 3' Intermittent Stream - Site 4         | 533.4'                   |

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**Total Linear Footage of Streams                      5513'**

Revised per Site visit from Corps of Engineers - August 1, 2006

