



"Heather"  
 <riverkeeper@ptrf.org>  
 03/03/2009 11:36 AM

To Rebecca Fox/R4/USEPA/US@EPA  
 cc  
 bcc  
 Subject RE: 401 info

I did note (from a Dorney email) that the Corps had altered some of the boundary in all three tracts from alt.L. I guess from my perspective it doesn't matter if the impacts are considered low quality. If SCR on S33 is considered a practicable mining boundary (within any of the extended alternatives) than the Corps or DWQ can't permit a larger impact.

Thanks.

Heather Jacobs Deck  
 Pamlico-Tar Riverkeeper  
 Pamlico-Tar River Foundation  
 Phone: (252) 946-7211  
 Cell: (252) 402-5644  
 Fax: (252) 946-9492  
 www.ptrf.org  
 Waterkeeper Alliance Member

-----Original Message-----

From: Fox.Rebecca@epamail.epa.gov [mailto:Fox.Rebecca@epamail.epa.gov]  
 Sent: Tuesday, March 03, 2009 11:28 AM  
 To: Heather  
 Subject: Re: 401 info

Heather,

When we were talking earlier, I believe you said that 401 impacts on S33 were teh L impacts rather than SCR. I believe the COE has reached a compromise which is reflected in modified 401 where the impacts are somewhere in between the 2 alternatives -- avoids 19 more acres of wetlands and 3,227 more lf of stream over Alt L on S33 -- not as much as SCR but increased avoidance over L. They claim the remaining impacts in S33 are low quality. Wasn't sure if you were aware of this...

Becky Fox  
 Wetland Regulatory Section  
 USEPA  
 Phone: 828-497-3531  
 Email: fox.rebecca@epa.gov

"Heather"  
 <riverkeeper@ptrf.org>  
 03/03/2009 10:37 AM

To  
 Rebecca Fox/R4/USEPA/US@EPA  
 cc  
 Subject  
 401 info

Attached is the modified memo that covers the main points. Since this is a state permit challenge, of course we are focusing on buffers, procedural items, and the significant natural heritage area. But again, we will include the practicability analysis and challenge impacts to NCPC.

Appreciate keeping this information within the agency. Thanks.

Heather Jacobs Deck  
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Waterkeeper Alliance Member

[attachment "01-29-09 PTRF Board Meeting memo - EPA.pdf" deleted by  
Rebecca Fox/R4/USEPA/US]



"Pace.Wilber"  
<Pace.Wilber@noaa.gov>  
03/04/2009 06:55 PM

To Rebecca Fox/R4/USEPA/US@EPA, Ron Sechler  
<ron.sechler@noaa.gov>

cc

bcc

Subject Re: PCS federal agency call at 9:30 on 3-5

Thanks Becky. Ron and I are looking forward to the call.

Pace

Fox.Rebecca@epamail.epa.gov wrote:

> Thanks everyone for being available on such short notice. We plan to  
> start call at 9:30. Call in # is: 866.299.3188 PW = 404 562 9401#  
>  
> I am attaching an excel file from our economist. It will be very  
> helpful if you can have this open on your computer so we can discuss the  
> findings of our economic model during the call.  
>  
> Talk to everyone in the morning and thanks again! bf  
>  
> (See attached file: PCS MINING v2 3\_4\_09.xls)  
>  
> Becky Fox  
> Wetland Regulatory Section  
> USEPA  
> Phone: 828-497-3531  
> Email: fox.rebecca@epa.gov

--

-----  
Pace Wilber, Ph.D.  
Atlantic Branch Chief, Charleston (F/SER47)  
Southeast Regional Office, NOAA Fisheries  
PO Box 12559  
Charleston, SC 29422-2559

843-953-7200  
FAX 843-953-7205  
pace.wilber@noaa.gov

<http://sero.nmfs.noaa.gov/dhc/habitat.htm>



"Heather"  
<riverkeeper@ptrf.org>  
03/05/2009 09:37 AM

To Rebecca Fox/R4/USEPA/US@EPA  
cc  
bcc  
Subject N&O story on congressional letter

History:  This message has been replied to.

<http://www.newsobserver.com/politics/story/1429590.html>

fyi

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Waterkeeper Alliance Member



"Pace.Wilber"  
<Pace.Wilber@noaa.gov>  
03/05/2009 02:46 PM

To Rebecca Fox/R4/USEPA/US@EPA  
cc mike\_wicker@fws.gov, pete\_benjamin@fws.gov,  
ron.sechler@noaa.gov, Palmer  
Hough/DC/USEPA/US@EPA, Jennifer  
bcc

Subject PCS and NOAA

History:  This message has been replied to.

Hi Becky.

Thanks for organizing the call the morning. I've confirmed with the Wilmington District that they have not sent a 3(c) letter to NOAA Fisheries, but they would like a timely response to their Feb 13 letter where they used the EFH consultation process to provide us with their response to our EFH concerns. We had previously indicated that we would respond by March 6, but based on today's call, we let the District know that our response would come by COB March 13. Please let Ron or me know if you have any questions.

Pace

--

-----  
Pace Wilber, Ph.D.  
Atlantic Branch Chief, Charleston (F/SER47)  
Southeast Regional Office, NOAA Fisheries  
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Charleston, SC 29422-2559

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"Heather"  
<riverkeeper@ptrf.org>  
03/06/2009 03:10 PM

To Rebecca Fox/R4/USEPA/US@EPA  
cc  
bcc

Subject RE: N&O story on congressional letter

History: This message has been forwarded.

Thanks Becky,

That is really helpful and encouraging. We have had conversations and meetings with political aides to all that signed the letter. Apparently this is what they told Coastal Fed - All responded that they don't care if the permit is issued or not, only they want a decision-- sounds as though they are tired of hearing about it. We've worked hard to educate them on the timeline issue. And we strongly recommended they consult the other side before sending future letters of that kind.

As for the 404 timeline, Geoff suggests this (but states he needs to do a little research to be sure): I don't think a challenge of the 401 would require the Corps to hold up the 404 because there's not automatic stay. That said, if the 401 is thrown out, the 404 will be invalid.

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Waterkeeper Alliance Member

-----Original Message-----

From: Fox.Rebecca@epamail.epa.gov [mailto:Fox.Rebecca@epamail.epa.gov]  
Sent: Friday, March 06, 2009 2:06 PM  
To: Heather  
Subject: Re: N&O story on congressional letter

Thanks Heather!

Just wanted to give you a brief update. We have been looking very closely at the NPV #s and have had several calls with our economist and yesterday a call with other federal agencies (including mgmt level and our HQs) to talk to them about the implications of the model. I thought you may want to see the latest we are looking at -- I think you have already seen it but it has 6 worksheets and if you look at worksheet 5, you can see at what year each alternative would go into the negative -- S33AP at year 13 and Alt L at year 24 (the year above where it shows a negative on the table) -- mod Alt L would likely go negative slightly sooner -- but even Alt L goes negative in out years. Then, of course worksheet 6 shows how much profit would be generated by each alternative. I also asked Matt to make a table showing the amount of profit, it PCS stopped operation when they went negative and how many years until that happened. See below.

(Embedded image moved to file: pic22867.jpg)

Thought I would also send you the excel spreadsheet we are working off of and the description of each worksheet.

Page 1. Predicted value per ton: On this page I used 1991 to 2007 USGS adjusted price per ton estimates from Table 2-7 on page 6-12 of Volume 1 of the FEIS to predict future prices per ton for the next 50+ years. Predictions were done with a basic OLS regression.

Page 2. Predicted cost per ton: On this page I simply recorded the cost per ton estimates for each year for each alternative from Table 2-6 on page 6-11 of the FEIS. See page 2-25 of Volume 1 of the FEIS for a discussion of the Marston cost model annual cost estimates. It appears that the estimates take into account transportation costs, depth, quality of ore, and development costs.

Page 3. Concentrate tons per year: On this page I have simply recorded the expected tons extracted from each alternative for each year. These numbers come from the tables in Appendix D of the FEIS.

Page 4. Price minus cost per ton: On this page I have subtracted the Page 2 Predicted cost per ton for each alternative for each year from the Page 1 Predicted value per ton per year. This gives us expected profit per ton per year for each alternative. (price per unit - cost per unit = profit per unit)

Page 5. Price minus cost per year: On this page I have multiplied the profit per ton per year for each alternative (from page 4) time the number of expected tons mined per year for each alternative (page 3) to get total profit per year. (profit per unit \* number of units = total profits)

Page 6. Net Present Value of Alts: On this page I have use both a 3% and 7% discount rate (which OMB requires us to use) to discount the profit per year estimates (page 5) back to their value in 2008. I have also constructed total NPV tables which are just the sum of the discounted profit estimates for a given alternative

(See attached file: PCS MINING v2 3\_4\_09.xls)

Everyone is at least interested and our HQs is supportive so far. We really won't know our direction until we brief our RA on 3-12. I did mention to the other agencies that you all were considering a petition of the 401 -- didn't say you had decided -- hope that was ok -- didn't think that was confidential since Dorney has been telling me that he thought you all would likely do that. The other agencies were happy to hear that and especially NMFS said that would help them with their higher ups. Do you know if that stops the 404 clock? Our attorney said it is different in different states -- some it does, some it doesn't. Just wanted to let you know what is happening but keep it fairly quiet -- not to be shared with press or outside sources -- you can, of course, share with SELC. Talk to you later. bf

Becky Fox  
Wetland Regulatory Section  
USEPA  
Phone: 828-497-3531  
Email: fox.rebecca@epa.gov

"Heather"  
<riverkeeper@ptr  
f.org>

03/05/2009 09:37  
AM

Rebecca Fox/R4/USEPA/US@EPA

To

cc

Subject  
N&O story on congressional letter

<http://www.newsobserver.com/politics/story/1429590.html>

fyi

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Waterkeeper Alliance Member



"Heather"  
<riverkeeper@ptrf.org>  
03/10/2009 09:52 AM

To Rebecca Fox/R4/USEPA/US@EPA  
cc  
bcc  
Subject N&O editorial

History:  This message has been replied to and forwarded.

Fyi

<http://www.newsobserver.com/opinion/editorials/story/1431016.html>

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Waterkeeper Alliance Member

Stan Meiburg /R4/USEPA/US  
03/11/2009 05:29 PM

To sam\_hamilton@fws.gov  
cc  
bcc  
Subject Phone call

Sam, when you get a chance, could you give me a call? Subject is PCS Phosphates in NC.

Thanks!

Stan

A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303

Office: (404) 562-8357  
Fax: (404) 562-9961  
Cell: (404) 435-4234  
Email: meiburg.stan@epa.gov



Sam\_Hamilton@fws.gov  
03/12/2009 09:08 AM

To Stan Meiburg/R4/USEPA/US@EPA  
cc  
bcc

Subject Re: Phone call

History:

☐ This message has been replied to.

Travelling w/ poor cell coverage. Will try and call later today or friday.  
Sam

----- Original Message -----  
From: Meiburg.Stan  
Sent: 03/11/2009 05:29 PM AST  
To: Sam Hamilton  
Subject: Phone call

Sam, when you get a chance, could you give me a call? Subject is PCS  
Phosphates in NC.

Thanks!

Stan

A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303

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Email: meiburg.stan@epa.gov

Stan Meiburg /R4/USEPA/US  
03/16/2009 11:06 PM

To Gregory Peck, Mike Shapiro@EPA  
cc  
bcc  
Subject Fw: Appeal of PCS 401 certification

FYI

Stan

A. Stanley Meiburg  
Acting Regional Administrator  
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----- Forwarded by Stan Meiburg/R4/USEPA/US on 03/16/2009 11:03 PM -----

Tom Welborn/R4/USEPA/US

03/16/2009 07:30 AM



To Stan Meiburg/R4/USEPA/US, Jim  
Giattina/R4/USEPA/US@EPA  
cc Scott Gordon/R4/USEPA/US, Jeff\_Weller@fws.gov, Jennifer  
Derby/R4/USEPA/US@EPA  
Subject Appeal of PCS 401 certification

FYI, 401 certification has been challenged.

  
  
03-12-09 - Petition for Contested Case Hearing.pdf

Tom Welborn, Chief  
Wetlands, Coastal and Oceans Branch  
EPA Region 4  
61 Forsyth Street, SW  
Atlanta, GA 30303  
404-562-9354  
404-562-9343(FAX)  
404-895-6312(cell)

PLEASE PRINT CLEARLY OR TYPE

STATE OF NORTH CAROLINA

IN THE OFFICE OF ADMINISTRATIVE HEARINGS

COUNTY OF (1) Wake

(2) Pamlico-Tar River Foundation, North Carolina Coastal Federation, Environmental Defense Fund, and Sierra Club
(your name) PETITIONERS,
v.
(3) North Carolina Department of Environment and Natural Resources - Division of Water Quality
RESPONDENT.
(The State agency or board about which you are complaining)

PETITION FOR A CONTESTED CASE HEARING

I hereby ask for a contested case hearing as provided for by North Carolina General Statute § 150B-23 to challenge the actions of the Department of Environment and Natural Resources - Division of Water Quality in issuing Water Quality Certification No. 3771 to PCS Phosphate Company on January 15, 2009.

This petition challenges the Division of Water Quality's issuance of Water Quality Certification No. 3771 to PCS Phosphate's Aurora operation, the permitted facility in the recent contested case U.S. Department of the Interior v. N.C. Department of Environment and Natural Resources (08 EHR 1067-Morrison).

(If more space is needed, attach additional pages.)

(4) Because of these facts, the State agency or board has: (check at least one from each column)
deprived me of property;
ordered me to pay a fine or civil penalty; or
otherwise substantially prejudiced my rights;
AND
exceeded its authority or jurisdiction;
acted erroneously;
failed to use proper procedure;
acted arbitrarily or capriciously; or
failed to act as required by law or rule.

(5) Date: March 12, 2009 (6) Your phone number: (919) 967-1450

(7) Print your full address: 200 W. Franklin St., Suite 330 Chapel Hill, NC 27516

(8) Print your name: Geoff Gistler

(9) Your signature: [Handwritten Signature]

You must mail or deliver a COPY of this Petition to the State agency or board named on line (3) of this form. You should contact the agency or board to determine the name of the person to be served.

CERTIFICATE OF SERVICE

I certify that this Petition has been served on the State agency or board named below by depositing a copy of it with the United States Postal Service with sufficient postage affixed OR by delivering it to the named agency or board:

(10) Mary Penny Thompson (name of person served) (11) N.C. Department of Environment and Natural Resources (State agency or board listed on line 3)
512 North Salisbury Street, 14th Floor Raleigh NC 27604
(street address/p.o. box) (city) (state) (zip code)

(13) This the 12th day of March, 2009

(14) [Handwritten Signature] (your signature)

When you have completed this form, you MUST mail or deliver the ORIGINAL AND ONE COPY to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714.

## I. INTRODUCTION

The Pamlico-Tar River Foundation, North Carolina Coastal Federation, Environmental Defense Fund, and Sierra Club (collectively "Citizen Groups") respectfully submit this Petition for a Contested Case Hearing ("Petition") to formally object to a final action of the North Carolina Division of Water Quality ("DWQ") approving and issuing Water Quality Certification No. 3771 ("Water Quality Certification" or "401 Certification") to PCS Phosphate, Inc. ("PCS") for its proposed expansion of its strip-mining operation northwest and west of Aurora in Beaufort County. The Citizen Groups respectfully file this petition because the Water Quality Certification authorizes PCS to expand its mining operation into nearly 4,000 acres of wetlands and approximately 5 miles of streams in violation of state water quality standards. A copy of the Water Quality Certification issued on January 15, 2009 is included as Exhibit 1 to this Petition.

## II. JURISDICTION AND STANDING

### A. **This Petition is Timely**

The North Carolina Administrative Procedure Act sets forth a 60-day general limitation for filing a petition in a contested case, which "shall commence when notice is given of the agency decision." N.C. Gen. Stat. § 150B-23(f). DWQ approved the Water Quality Certification on January 15, 2009. Therefore, Citizen Groups timely file this Petition for a Contested Case Hearing within the 60-day limitation prescribed by N.C. Gen. Stat. § 150B-23(f) and stated within the terms of the Water Quality Certification.

### B. **Citizen Groups are Entitled to Bring this Contested Case as "Persons Aggrieved" Within the Meaning of North Carolina's Administrative Procedure Act**

North Carolina's Administrative Procedure Act, N.C. Gen. Stat. §150B-23, provides that a contested case may be brought by a "person aggrieved." The Act defines "person aggrieved" as "any person or group of persons of common interest directly or indirectly affected substantially in his or its person, property, or employment by an administrative decision." N.C. Gen. Stat. § 150B-2(6). A "person" is defined to include "any natural person, partnership, corporation, body politic and any unincorporated association, organization, or society." N.C. Gen. Stat. § 150B-2(7). As alleged in further detail below, DWQ has substantially prejudiced Citizen Groups' rights by issuing the Water Quality Certification for the mine expansion.

#### 1. Pamlico-Tar River Foundation

The Pamlico-Tar River Foundation, Inc. ("PTRF") is a North Carolina non-profit corporation founded in 1981. For generations, the Tar-Pamlico River has supported life in the watershed, and its future health is directly tied to impacts from future development.

Pamlico-Tar River Foundation, et al. v. N.C. Division of Water Quality  
Attachment to Form H-06

PTRF strives to preserve the high quality of life of residents in the Tar-Pamlico watershed by protecting the river's environmental resources.

PTRF has approximately 2,000 members, most of whom live and work on or near the Pamlico and Tar Rivers. PTRF has its principal office in Washington, Beaufort County, North Carolina. Many PTRF members visit, recreate, fish, hunt, boat, swim, view wildlife, and otherwise use and enjoy the waters of the Pamlico River.

Protecting the quality of the nutrient-sensitive waters of the Pamlico River is one of PTRF's central missions. The organization is involved in educational initiatives, documenting environmental impacts on the river, legislative efforts, and submitting comments during regulatory rulemaking. PTRF has sought to protect the water quality of the Pamlico River during the process leading to this 401 Certification by participating in the Review Team that provided input during the environmental impact statement ("EIS") process as well as commenting on the draft EIS, supplemental EIS, final EIS, and 401 Certification application.

The 401 Certification would substantially affect the interests of PTRF and its members in protecting the water quality of the Tar-Pamlico River basin. Specifically, the Water Quality Certification would allow destruction of wetlands, surface waters, and riparian buffers that are integral to PTRF's efforts to protect basin-wide water quality and would impair the use of waters in the Tar-Pamlico River basin and downstream for commercial and recreational fishing, recreational boating, wildlife, and fish and aquatic life propagation and survival.

2. North Carolina Coastal Federation

The North Carolina Coastal Federation ("Coastal Federation") is a non-profit corporation dedicated to the promotion of better stewardship of coastal resources. The Coastal Federation was founded in 1982 and has approximately 8,500 members, including numerous members who live near, shellfish or fish in, or regularly visit the Pamlico River estuary, Pamlico Sound, and nearby coastal waters.

Part of the Coastal Federation's purpose is to protect coastal waters and estuaries for the use and enjoyment of all of the citizens of the state. As part of this work, the Coastal Federation has played a lead role in investigating, documenting, publicizing, and seeking enforcement of violations of state and federal sedimentation, stormwater, water quality, and wetlands laws. In addition, to protect coastal waters from degradation from stormwater-borne pollutants, the Coastal Federation is working extensively through the state regulatory process to improve and strengthen the State's stormwater control program applicable to coastal areas.

The Coastal Federation has actively participated in the deliberations and rulemaking proceedings initiated by the Coastal Resources Commission and the Environmental Management Commission that relate to wetlands, stormwater, water quality, coastal outstanding resource waters, and shellfish issues, and has been a party to

several administrative and judicial appeals related to these matters. Through regular participation in informal and formal proceedings and through its broader public education efforts, the Coastal Federation represents its members' interests in the appropriate stewardship of North Carolina's coastal resources, including its public trust waters.

To further those environmental protection goals, the Coastal Federation joined PTRF, Environmental Defense Fund, and other organizations as intervenors in PCS's variance request before the Water Quality Committee in September 2008. That challenge built on the Coastal Federation's long track record of direct participation in permit decisions involving the phosphate mining operations now managed by PCS. In the mid-1980s it was instrumental in identifying, and pushing for adoption of, significant enhancements to the operation's National Pollution Discharge Elimination System wastewater permit. DWQ required the facility to implement the recycling technology that the Coastal Federation advocated for, resulting in reduced pollution discharges from the site.

The 401 Certification would substantially affect the interests of the Coastal Federation and its members in protecting the water quality, wetlands, and nursery areas that are essential to a productive coastal ecosystem. The impacts to wetlands, streams, and riparian buffers approved by the 401 Certification will have long-term impacts on finfish and shellfish in the Pamlico River, Pamlico Sound, and coastal North Carolina. Those impacts will impair Coastal Federation members' use of waters downstream for fishing, recreational boating, wildlife, and fish and aquatic life propagation and survival.

### 3. Environmental Defense Fund

The Environmental Defense Fund ("EDF"), representing a national board and membership of more than 300,000 individuals, is dedicated to protecting the integrity and function of important ecosystem resources and processes, including wetlands and other aquatic systems. With more than 9,000 members in North Carolina, EDF has had a formal presence in the state since 1987. Since the establishment of the North Carolina office, EDF has been intimately engaged in the environmental affairs of eastern North Carolina and specifically with the issues related to protection of wetlands and water quality at the PCS facility site.

Since 1987, EDF has been directly engaged in multi-agency discussions relating to proposed mining advance scenarios, which would disrupt thousands of acres in the central Pamlico watershed. EDF has reviewed and commented on a series of mine advance and mitigation documents, including those produced in the inter-agency discussions held by the U.S. Army Corps of Engineers ("Corps") since 2001. EDF has been a member of the Corps' Review Team convened to provide input during PCS's Clean Water Act permit process and the development of the environmental impact statement. EDF submitted substantive comments on the draft EIS for the proposed mine expansion and has consistently expressed reservations about the company's most recent alternative which is the basis for the current 401 Certification.

Pamlico-Tar River Foundation, et al. v. N.C. Division of Water Quality  
Attachment to Form H-06

This involvement by EDF fits within the organization's overall goal to protect the health of the Albemarle-Pamlico estuary. An essential ingredient in this effort is to protect habitats and water quality that serve as the nurseries for juvenile finfish and shellfish that supply the commercial and recreational fisheries on the North Carolina coast and beyond. The plan also includes promoting efforts to control nutrient inputs into the Tar-Pamlico River basin.

The mine expansion approved by the 401 Water Quality Certification includes the destruction of wetlands, streams, and buffers in locations and on a scale that will thwart EDF's efforts to protect this estuarine system. Moreover, the impacts of the mine expansion will impair use of waters downstream for fishing, recreational boating, wildlife, and fish and aquatic life propagation and survival. These impacts will adversely affect both EDF's organizational purpose and the interests of its members in fishing, swimming, paddling, and recreating in the Pamlico River.

4. Sierra Club

The Sierra Club is a national grassroots conservation organization with over 1.3 million members nationally and approximately 16,500 members in North Carolina. The organization has a three tier structure, with national, state, and local bodies. The Sierra Club has had a statewide chapter in North Carolina for over 20 years and a chapter office in North Carolina since 1997. That statewide chapter oversees 13 local groups, including the Greenville-based Cypress Group. The Cypress Group represents more than 1,000 members in the 23 counties of northeastern North Carolina, including Beaufort County.

The mission of the Sierra Club is to protect "communities, wild places, and the planet itself." At the state level, the organization advocates for strong water quality and coastal protection through the development of policy positions, education of the public and the media, grassroots organizing, and direct advocacy to elected and appointed officials. At a local level, the Cypress Group educates members and local citizens through educational programs; monthly meetings; and hiking, kayaking, and wildlife viewing trips, including trips on the Pamlico River in the vicinity of the PCS site.

The 401 Certification authorizes impacts to wetlands, surface waters, and riparian buffers that will adversely affect the efforts of the national, state, and local levels of the Sierra Club. As permitted, the mine expansion will have significant impacts to water quality, wildlife habitat, and downstream fisheries and will consequently impede the purpose of the national, state, and local levels of the Sierra Club as well as substantially affecting the interests of its members.

This substantial harm to PTRF's, NCCF's, EDF's, Sierra Club's, and their respective members' interests can only be redressed by a decision vacating the 401 Water Quality Certification issued to PCS Phosphate and remanding consideration of the permit to the Division of Water Quality.

### III. GROUNDS FOR OBJECTION

In issuing the 401 Certification, DWQ exceeded its authority, acted erroneously, failed to use proper procedure, acted arbitrarily and capriciously, and failed to act as required by law or rule. Thus, DWQ issued a Water Quality Certification for the destruction of nearly 4,000 acres of wetlands and close to 5 miles of streams that will not protect water quality or existing uses of the Pamlico River and its watershed. Because Citizen Groups and their members live, work, and recreate in the area affected by the 401 Certification, DWQ's final agency decision will substantially prejudice Citizen Groups' rights. Therefore, Citizen Groups object to DWQ's issuance of the Water Quality Certification on the following non-exclusive grounds:

#### A. Factual Background

The Pamlico River carries the freshwater of the Tar River into the Pamlico Sound, where it joins with the Albemarle Sound to create the nation's second largest estuary system. In addition to its great scenic beauty and widespread recreational opportunities, the Pamlico River hosts commercially and recreationally important fish and shellfish species as well as waterfowl, shorebirds, and other migratory birds. The Albemarle-Pamlico estuary system functions as a nursery for more than 90 percent of the commercial seafood species caught in North Carolina, a \$1 billion annual industry. The stretch of the Pamlico River within Beaufort County alone contributes nearly \$3 million annually in commercial fish and shellfish.

In the Water Quality Act of 1987, Congress identified the Albemarle-Pamlico Sound as an estuary in need of priority actions to address water quality problems. 33 U.S.C. § 1330(2)(B). In October 1987, the State of North Carolina and the U.S. Environmental Protection Agency ("EPA") designated the Albemarle-Pamlico estuary as an estuary of national significance and convened a management conference to assess water quality and recommend measures to control sources of pollution. Albemarle/Pamlico Sounds: State/EPA Conference Agreement for National Estuary Program Designation Under the Water Quality Act of 1987 (Oct. 20, 1987). In designating the Albemarle-Pamlico estuary, the state and EPA identified wetland loss, excessive nutrients, decline in fisheries productivity, and fish diseases as major sources of environmental stress.

PCS applied to expand its strip-mining operation along the Pamlico River in Beaufort County in November 2000 and modified that permit application the following August to request a mine expansion into 3,500 acres, including 2,400 acres of wetlands and 7 miles of streams, as well as 3 creeks identified as primary nursery areas for juvenile finfish and shellfish. The site of the proposed expansion is immediately adjacent to the Pamlico River and South Creek, a special secondary nursery area. Because of the project's proposed impacts to wetlands and streams, the U.S. Army Corps of Engineers initiated the development of an environmental impact statement in early 2001. That evaluation compared PCS's preferred 15-year mine expansion to other alternatives in a draft EIS released in October 2006. That draft was supplemented in November 2007 to

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add two new alternatives, including Alternative L. The Corps released the final EIS ("FEIS") on May 23, 2008.

One month before the final EIS was released, in April 2008, PCS abandoned its 15-year preferred alternative and requested a 37-year permit for mine expansion from the Corps. That 37-year mine expansion alternative, Alternative L, was also the subject of the company's 401 Water Quality Certification application to DWQ. In it, the company requested authorization to mine more than 11,000 acres, including 4,135 acres of wetlands and approximately 5 miles of streams.

DWQ granted PCS's 401 Certification request on December 5, 2008, authorizing the destruction of 3,789 acres of wetlands, 3.5 miles of streams, and 28 acres of streamside, riparian buffers. That Certification is attached as Exhibit 2. PCS objected to that Certification, requesting that DWQ relax its terms to allow additional mining. DWQ issued a modified 401 Certification on January 15, 2009 incorporating PCS's requested modifications.

That Certification, which Citizen Groups challenge in this petition, authorizes PCS to destroy 3,953 acres of wetlands, 4.9 miles of streams, and 48 acres of riparian buffers that are protected under the Tar-Pamlico Riparian Buffer Rules. Within those wetland acres, the 401 Certification approves the destruction of more than 50 acres of a hardwood wetlands forest that is a nationally significant natural heritage area as defined by the N.C. Natural Heritage Program. The remaining parts of the forest would be bisected by a 1,200 foot wide corridor as part of a plan that includes mining on three sides of both of the remaining forest segments.

**B. Legal Framework**

1. Water Quality Certification Requirements

This case arises under Clean Water Act § 401 and North Carolina's water quality and pollution control regulations. Under § 401 of the Clean Water Act, the Corps cannot issue a § 404 permit for impacts to surface waters and wetlands unless DWQ first certifies that the project will comply with all applicable water quality standards. Section 401(a)(1) provides:

Any applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate . . . that any such discharge will comply with the applicable provisions of [the Clean Water Act].

33 U.S.C. § 1341(a)(1).

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According to the federal Clean Water Act and North Carolina law, DWQ must ensure compliance with all applicable state water quality standards before issuing a § 401 water quality certification. If expansion of PCS's strip-mine would violate water quality standards and cannot reasonably be expected to meet water quality standards through remedial actions, DWQ must deny certification. See 33 U.S.C. § 1341(a)(1), (3). The federal Clean Water Act also authorizes DWQ to conditionally approve a § 401 certification by imposing any conditions or "any other appropriate requirement of State law" necessary to ensure compliance with water quality standards. See 33 U.S.C. § 1341(d).

The North Carolina Environmental Management Commission has adopted rules that control DWQ's issuance of 401 certifications. Those procedures require DWQ to evaluate specific factors before issuing a 401 certification for wetland and stream impacts. Before issuing the certification, the state must find that the project:

- 1) has no practical alternatives;
- 2) will minimize adverse impacts to surface waters;
- 3) does not result in the degradation of groundwaters and surface waters;
- 4) does not result in cumulative impacts that will cause a violation of water quality standards;
- 5) protects downstream water quality standards with on-site stormwater control measures; and
- 6) provides for replacement of existing uses through wetland or stream mitigation.

15A N.C. Admin. Code 02H .0506(b), (c). In addition to these factors, if the applicant proposes impacts to wetlands of exceptional state or national significance, the state must find that those impacts are necessary to meet a demonstrated public need before a 401 certification can issue. 15A N.C. Admin. Code 02H .0506(e).

Because of the location of PCS's proposed project, the Tar-Pamlico Buffer Rules also apply to this 401 Certification. Those rules, implemented to protect water quality in the Tar-Pamlico River, provide protection for 50-foot streamside, riparian buffers within the Tar-Pamlico watershed. See 15A N.C. Admin. Code 02B .0259. Under those rules, PCS's proposed mine plan requires buffer mitigation for every acre of buffer impacted according to established ratios. Buffers that are destroyed within the 30 feet closest to the surface water must be mitigated at a 3:1 ratio. When the section of buffer from 30 to 50 feet from the surface water is impacted, it must be mitigated at a 1.5:1 ratio. 15A N.C. Admin. Code 02B .0259(4). Further, the rules specify that mitigation must be done at least as close to the Pamlico estuary as the proposed impact and as close to the impact as feasible. 15A N.C. Admin. Code 02B .0260(4).

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2. Federal and North Carolina Law Require Restoration and Protection of Water Quality and Existing and Designated Uses

Congress enacted the Clean Water Act not merely to preserve existing water quality, no matter how degraded, but to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). One of the goals of the Act is to achieve, “wherever attainable . . . water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.” Id. at § 1251(a)(2).

The Act further requires states to develop standards and measures to meet these goals. Under § 303 of the Clean Water Act, state water quality standards must “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based on such uses.” 33 U.S.C. § 1313(c)(2)(A). The U.S. Supreme Court has made clear that “§ 303 is most naturally read to require that a project be consistent with *both* components, namely the designated use *and* the water quality criteria.” PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, 511 U.S. 700, 715 (1994) (emphasis in original). Thus, “a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.” Id. It is therefore beyond question that DWQ is prohibited from approving a water quality certification for a project that will not protect water quality and designated uses.

North Carolina’s General Assembly has acted to protect the water quality and beneficial uses of the State’s waters by declaring “the public policy of this State to provide for the conservation of its water and air resources.” N.C. Gen. Stat. § 143-211(a). Further, “[i]t is the public policy of the State to maintain, protect, and *enhance* water quality within North Carolina.” N.C. Gen. Stat. § 143-211(b) (emphasis added). The EMC has promulgated regulations to implement the General Assembly’s mandate to develop “[s]tandards of water and air purity . . . designed to protect human health, to prevent injury to plant and animal life, to prevent damage to public and private property, to insure the continued enjoyment of the natural attractions of the State . . . and to secure for the people of North Carolina, now and in the future, the beneficial uses of these great natural resources.” N.C. Gen. Stat. § 143-211(c).

To ensure protection of the existing uses as well as designated uses based on a water’s classification, the regulations further provide that any “sources of water pollution which preclude any of these uses on either a short-term or long-term basis shall be considered to be violating a water quality standard.” 15A N.C. Admin. Code 02B .0211(2). In the 401 certification process, DWQ must ensure that “existing uses are not removed or degraded” for waters and wetlands. 15A N.C. Admin. Code 02B .0506(b), (c), (e).

**C. Practical Alternatives Exist to the 35-Year Mine Expansion Plan Authorized by the Water Quality Certification**

The Division of Water Quality can only approve a 401 certification if it finds there are no practical alternatives to the proposed project, yet issued this 401 Certification for a 35-year project that has practical alternatives. Because the 401 Certification issued to PCS relies on the fundamentally flawed economic analysis presented in the Corps' FEIS, DWQ's analysis of practical alternatives is both incomplete and erroneous.

It is undisputed that DWQ did not conduct a practical alternatives analysis for the last 20 years of mining that is authorized by the 401 Certification. Because DWQ must find that no practical alternatives with less adverse impact to surface waters or wetlands exist for the entire project, DWQ cannot approve a project based on a practical alternatives analysis of only part of that project. But in issuing this 401 Certification, DWQ relied on the practicability analysis in the FEIS, an analysis that only considered potential reconfiguration of the first 15 years of PCS's mine expansion. Based on that analysis – and absent any evaluation of alternative mine plans in years 16 through 35 – the 401 Certification authorizes 35 years of mine expansion. Moreover, when compared to the original 401 Certification, the modified 401 Certification approved additional wetland and stream impacts during this time period without any evaluation of the practical alternatives to that expanded impact.

DWQ's reliance on the FEIS's analysis of practical alternatives over the first 15 years is also erroneous. The Corps's economic analysis that is at the heart of the FEIS's practicability analysis is arbitrarily limited to 15 years, relies on erroneous analyses, and omits important factors. Because of these flaws, the analysis favors more environmentally destructive mine plans at the expense of reasonable alternatives. DWQ's reliance on the fundamentally flawed analysis in the FEIS is misplaced.

Indeed, practical alternatives to the 35-year mine expansion exist. Economic analyses submitted during the EIS process both identified the flaws of the FEIS's practicability analysis and demonstrated that PCS can economically mine substantially fewer acres of waters and wetlands by implementing alternative mine plans to avoid the most sensitive environmental areas.

**D. The 401 Certification Approves Buffer Impacts That Are Not Mitigated as Required by the Tar-Pamlico Buffer Rules**

The 401 Certification must, but does not, provide reasonable assurance that PCS's mine expansion complies with state water quality standards, including the Tar-Pamlico Buffer Rules. See 15A N.C. Admin. Code 02B .0259, *et seq.* The 401 Certification authorizes 48 acres of riparian buffer impacts, which require more than 100 acres of mitigation, yet does not include any mitigation that complies with the state water quality standards established by the rules.

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It is undisputed that PCS cannot provide adequate mitigation to offset the buffer impacts authorized by the 401 Certification under existing mitigation rules. The Certification fails to disclose the amount of mitigation required under existing rules, but PCS has conceded that it cannot comply with existing riparian buffer mitigation requirements by twice requesting a variance from the Environmental Management Commission that would allow the company to bypass the requirements. PCS's initial request was denied and the second request was withdrawn. The 401 Certification acknowledges this violation, conditioning the approved impacts on anticipated rulemaking by the EMC and PCS's future compliance with these currently nonexistent rules through the eventual submission of plans and DWQ's approval of those plans under authority that will presumably be granted by the to-be-developed rules. DWQ's conditioning of the 401 Certification on compliance with standards that do not yet exist violates the basic purpose of the certification process, to assure federal permitting agencies that the project complies with state water quality standards, and in fact confirms that the project does not comply with state law.

Even the buffer mitigation DWQ approved fails to meet the requirements of the Tar-Pamlico Buffer Rules. Those rules require all buffer mitigation to be done at least as close to the estuary as the proposed impacts. Despite this requirement, DWQ did not assess the proximity of the 24.4 acres of buffer mitigation accepted in the 401 Certification or determine whether the proposed buffer mitigation is at least as close to the estuary as the impact as required by the rules. Instead, DWQ relied on a new draft interpretation of the buffer mitigation rules released for public comment one day before the original 401 Certification was issued. That draft interpretation, however, conflicts with both the enabling legislation for riparian buffer mitigation and the history of the Tar-Pamlico Buffer Rules. Without this unlawful interpretation, none of PCS's proposed buffer mitigation meets the rule's location requirements.

**E. The 401 Certification Authorizes the Destruction of Wetlands of Exceptional National Significance Without the Required Determination of Public Need**

The Division of Water Quality failed to make the mandatory public need determination before authorizing impacts to wetlands of exceptional national ecological significance in the 401 Certification. The nonriverine wet hardwood forest that is within the proposed mine expansion represents one of the top five examples of nonriverine wet hardwood forests that remain in the nation. The N.C. Natural Heritage Program has designated the forest a nationally significant natural heritage area. Thus, under the elevated standards for wetlands of exceptional national ecological significance, DWQ must conduct an analysis of the public need for mining impacts to the wet hardwood forest. DWQ did not conduct that analysis. There is no public need for the impact to these wetlands of exceptional ecological significance and authorizing these impacts therefore violated water quality standards.

**F. The 401 Certification Would Impair Existing Uses of Surface Waters and Wetlands**

The impacts approved by the 401 Certification will degrade existing uses of surface waters and wetlands in violation of water quality standards. As described above, the Pamlico River plays an important role in the entire coastal ecosystem of North Carolina. The tributaries to the Pamlico River are integral to the river's natural and economic value. The mine expansion authorized by the 401 Certification will reduce the drainage basins of nine creeks within the project area by at least half of their existing basins, including four creeks that the N.C. Wildlife Resources Commission has identified as primary nursery areas because of the habitat they provide for juvenile finfish and shellfish. Three of those primary nursery areas, as well as other creeks that will be affected by mining, flow into a special secondary nursery area, South Creek.

Impacts to these sensitive areas will affect food webs within the estuarine ecosystem, alter the rate of nutrient loading into the estuary, and reduce important freshwater inputs from the drainage basins. The mine expansion will have significant adverse impacts to public trust waters, fish habitat, and water quality. The indirect effects of the project include negative impacts associated with heavy metal contamination, drainage basin reductions, long-term water quality impacts from mining, and loss of wetland functions. Because of these significant adverse impacts to natural resources, the N.C. Division of Marine Fisheries, N.C. Wildlife Resources Commission, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and South Atlantic Fisheries Management Council recommended denial of a permit for the mine expansion authorized by the 401 Certification.

Further, the authorized mine expansion would degrade existing uses within the nationally significant nonriverine wet hardwood forest. The 401 Certification approves mining on three sides of the remnant segments of this forest, an excavation scheme that will disturb the existing hydrological structure that supports this rare forest.

Rather than modifying the mine plan to avoid these impacts, the 401 Certification requires monitoring to confirm these adverse effects. But monitoring for the loss of existing uses, and therefore violations of water quality standards, does not fulfill DWQ's obligation to provide reasonable assurance that the project will not violate water quality standards.

In addition, the proposed mitigation will not replace existing uses that will be eliminated by the mine expansion. A substantial portion of the proposed mining impacts will occur adjacent to the Pamlico River, eliminating wetlands and surface waters that currently buffer the river from the impacts of PCS's mine operation. The location of these wetlands and tidal creeks is important in determining the uses they provide. PCS's proposed mitigation sites are not near the estuary, will not perform the same functions as the existing streams and wetlands, and cannot replace the existing uses that will be lost under this 401 Certification.

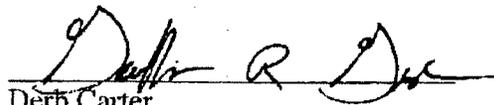
**G. The Modified 401 Certification Was Issued Without Public Notice  
Required by the Original 401 Certification**

The 401 Certification that DWQ issued on December 5, 2008 required DWQ to provide public notice under the standards established in 15A N.C. Admin. Code 02H .0503. That rule requires that the agency follow established procedures before taking action on a 401 certification. Those procedures require DWQ to inform the public of the specific plan under consideration and provide a minimum of 15 days of notice before taking agency action. Despite this requirement, the agency issued the modified 401 Certification on January 15, 2009 without public notice.

**IV. CONCLUSION**

For the foregoing reasons, DWQ exceeded its authority, acted erroneously, failed to use proper procedure, acted arbitrarily and capriciously, and failed to act as required by law or rule in approving and issuing the Water Quality Certification. Accordingly, the Water Quality Certification for PCS Phosphate's mine expansion must be vacated and remanded to DWQ.

Respectfully submitted this 12th day of March, 2009.



Derb Carter

Geoff Gisler

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NORTH CAROLINA COASTAL FEDERATION,  
ENVIRONMENTAL DEFENSE FUND, and SIERRA CLUB



Beverly Evans Perdue, Governor  
Dee Freeman, Secretary  
North Carolina Department of Environment and Natural Resources  
Coleen H. Sullins, Director  
Division of Water Quality

January 15, 2009

Mr. Ross M. Smith, Manager  
Environmental Affairs  
PCS Phosphate Company, Inc.  
P.O. Box 48  
Aurora, NC 27808

Re: PCS Phosphate Mine Expansion, Beaufort County  
DWQ #2008-0868, version 2.0; USACE Action ID. No. 200110096  
**MODIFIED APPROVAL of 401 Water Quality Certification with Additional Conditions**

Dear Mr. Smith:

Attached hereto is a copy of Certification No. 3771 issued to PCS Phosphate Company, Inc. of Aurora, NC, dated January 15, 2009. In addition, you must get any other federal, state or local permits before you proceed with your project including (but not limited to) Solid Waste, Sediment and Erosion Control, Stormwater, Dam Safety, Mining, Non-discharge and Water Supply Watershed regulations. This Certification completely replaces one issued to you on December 6, 2008.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen H. Sullins

CHS/jrd

Attachments: Certificate of Completion

cc: Mr. Tom Walker, U.S. Army Corps of Engineers, Asheville Regulatory Field Office  
Dave Lekson, US Army Corps of Engineers, Washington Regulatory Field Office  
Scott McLendon, Wilmington District, USACOE  
Kyle Barnes, DWQ, Washington Regional Office  
Al Hodge, DWQ, Washington Regional Office  
DLR Washington Regional Office  
File Copy  
Matt Matthews, DWQ Wetlands and Stormwater Branch  
Cyndi Karoly, DWQ  
John Payne, NC Attorney General's Office, Environmental Division  
Mike Schafele, NC Natural Heritage Program

Linda Pearsall, NC Natural Heritage Program  
Jimmie Overton, DWQ  
Jeff Furness, PCS Phosphate  
Stephen Rynas, NC Division of Coastal Management  
Shannon Deaton, NC Wildlife Resources Commission  
Derb Carter, Southern Environmental Law Center  
Geoffrey Gisler, Southern Environmental Law Center  
Heather Jacobs, Pamlico Tar River Foundation  
Sean McKenna, NC Division of Marine Fisheries  
Eric Kulz, DWQ  
Tammy Hill, DWQ  
Becky Fox, US Environmental Protection Agency  
Tom Welborn, US Environmental Protection Agency – Region 4 Atlanta  
Melba McGee, DENR  
Dee Freeman, DENR  
Coleen Sullins, DWQ  
Chuck Wakild, DWQ  
Paul Rawls, DWQ  
Ted Strong, Washington Daily News  
Susan Massengale, DWQ  
Julia Berger, CZR  
George House, Brooks, Pierce, McLendon, Humphrey and Leonard, LLP  
Jim Stanfill, EEP  
Mary Penny Thompson, DENR  
Susan Massengale, DWQ  
Ann Deaton, NC Division of Marine Fisheries  
John Hennessy, DWQ  
Ted Strong, Washington Daily News  
Wade Rawlins, News and Observer

Filename: 20080868v2PCSPHosphate(Beaufort) 401 modified

## NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500 to PCS Phosphate Company, Inc. of Aurora, NC based on an application to fill 4,124 acres of jurisdictional wetlands, 29,288 linear feet of streams, 19 acres of ponds and 55.14 acres of stream buffers in the Pamlico River Basin, associated with the expansion of PCS Phosphate's mining operation including the relocation of Highway 306 and Sandy Landing Road in Beaufort County, North Carolina, pursuant to an application filed on the 22nd day of May of 2008 through the published Public Notice by the US Army Corps of Engineers, and in additional correspondence received September 5, 2008 (dated September 4, 2008), November 3, 2008 (received November 5, 2008), December 19, 2008 (received December 22, 2008) and proposed impact maps dated January 6, 2009.

The application and supporting documentation provide adequate assurance that the proposed work will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, the additional correspondence noted above and conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted in the application materials, additional correspondence and as described in the Public Notice. If the property is sold after the Certification is granted, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions of this Certification. Any new owner must notify the Division and request the Certification be issued in their name. Should wetland, buffer or stream fill be requested in the future, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). If any plan revisions from the approved site plan result in a change in stream, buffer or wetland impact or an increase in impervious surfaces, the DWQ shall be notified in writing and a new application for 401 Certification may be required and a modified 401 Certification may be required. For this approval to be valid, compliance with all the conditions listed below is required.

### Conditions of Certification:

#### 1. Impacts Approved

The following impacts are hereby approved as long as all of the other specific and general conditions of this Certification are met. No other impacts are approved including incidental impacts other than listed in this table. Also, please note that these impacts are those approved by DWQ and are only a portion of the impacts that were originally applied for and listed in the Public Notice. These impacts are depicted on maps entitled "PCS Phosphate Mine Continuation - Modified Alt. L - NPC, Bonneron and South of 33 Proposed Impact" dated January 6, 2009.

	Amount Approved (Units)	Plan Location or Reference
Streams	25,727 feet	Final EIS, page e as well as June 6, 2008 and December 19, 2008 submittals to DWQ
404/CAMA Wetlands	3,953 acres	Final EIS, page e as well as June 6, 2008 and December 19, 2008 submittals to DWQ
Waters	19 acres	Final EIS, page e as well as June 6, 2008 and December 19, 2008 submittals to DWQ
Buffers	47.87 acres	Final EIS, page e as well as June 6, 2008 and December 19, 2008 submittals to DWQ

Sediment and Erosion Control:

2. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act or Mining Act of 1971 (as amended).
  
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the 404/401 Permit Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur.
  
4. Sediment and erosion control measures shall not be placed in wetlands or waters without prior approval by the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. All sediment and erosion control devices shall be removed and the natural

grade restored within two (2) months of the date that the Division of Land Resources or locally delegated program has released the project.

Continuing Compliance:

5. PCS Phosphate Company, Inc. shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act), the 401 Water Quality Certification rules (15A NCAC 2H .0500) and any other appropriate requirements of State law and federal law. If the Division determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the Division may reevaluate and modify this Certification to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H .0507(d). Before modifying the Certification, the Division shall notify PCS Phosphate Company, Inc. and the US Army Corps of Engineers, provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to PCS Phosphate Company, Inc. in writing, shall be provided to the United States Army Corps of Engineers for reference in any Permit issued pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project. This condition is intended to conform with the provisions of 15A NCAC 2H .0507 (d).

Mitigation:

6. Wetland and stream mitigation shall be done as follows and in accordance with mitigation as approved by the US Army Corps of Engineers. DWQ shall be copied on all draft mitigation plans and copied on all annual reporting on mitigation success. In addition, buffer mitigation shall be done in accordance with condition 7 below. In addition, DWQ shall be copied on a final accounting of the amount and type of proposed wetland, stream and buffer mitigation within 60 days of the issuance of the 404 Permit from the US Army Corps of Engineers. Any mitigation done outside the 8-digit HUC where PCS is located should follow the guidance for out of HUC mitigation as described in "Guidance on the Use of Compensatory Mitigation in Adjacent Cataloging Units" dated May 20, 2005 or its update by DWQ. Conservation easements or similar mechanisms to protect these mitigation sites shall be recorded on all mitigation sites to the written satisfaction of the US Army Corps of Engineers.
7. Buffer mitigation shall be conducted by PCS Phosphate at those mitigation sites with riparian buffer credit which total about 24.4 acres of buffer credit. If the Environmental Management Commission approves a flexible buffer mitigation program, then PCS Phosphate may submit a list and description of those sites to DWQ for written approval. If no additional riparian buffer mitigation sites and no flexible buffer mitigation sites are approved by DWQ and/or the NC Environmental Management Commission, then disturbance of buffers in the NCPC, Bonneron or South of 33 tracts shall not be done beyond the limits of the 2014 impact area shown on PCS' Project Impact Schedule Year 2008-2016 (generally south of Drinkwater Creek) (see Attachment One). DWQ shall be copied on all buffer mitigation site plans and written approval from DWQ is required for these plans before planting or land grading occurs.

8. Porter Creek enhancement – Additional written approval is required from DWQ for a wetland enhancement and stream restoration plan as well as a monitoring plan for the stream, headwater forest and hardwood flat at the upper end of Porter Creek. This plan shall include plugging or filling the existing ditch in order to reestablish surface flow into the wetland and stream channel. DWQ acknowledges wetland functional uplift for the 3.4 acre hardwood flat that is located between the stream and existing ditch and will count 1.7 acres of functional uplift of these non-riparian wetlands in order to account for DWQ's mitigation requirement in 15A NCAC 2H .0506 (h)(6). Stream mitigation credits are also available for the restoration of flow into the existing channel with appropriate monitoring and wetland mitigation for the functional uplift of the headwater forest if additional analysis documents that uplift.

Additional Minimization of Impact:

9. Hardwood Flat Avoidance and Minimization – Impact to the 135 acre ("135 A" on Attachment Two) portion, the 58 acre ("58 A" on Attachment Two) portion and the 20 acre secondary connection between these two locations ("20 acre connect" on Attachment Two) of the Bonnerton Road Non-Riverine Wet Hardwood Forest as depicted on Exhibit A of the letter dated October 20, 2008 from George House of Brooks, Pierce, McLendon, Humphrey and Leonard, LLP to Paul Rawls of the NC Division of Water Quality shall be avoided and the area not mined or cleared since this wetland is a "wetland of exceptional state or national ecological significance" in accordance with 15A NCAC 2H .0506(e) except that a 1,145 foot wide mining and utility corridor is allowed in the narrowest part of the Bonnerton Road Non-Riverine Wet Hardwood Forest. Mining is also allowed in the northeast triangle of "58A" WHR area as outlined in exhibit 14 of PCS's December 19, 2008 letter. In order to protect the uses of this Non-Riverine Wet Hardwood Forest wetland that will not be mined, a conservation easement shall be placed on the wetland and restored mining and utility corridor to preclude impacts including mining, logging and any other disturbance of the vegetation or soils that would result in its delisting as a state or nationally significant wetland area. This conservation easement shall be sent to DWQ within 60 days of the issuance of the 404 Permit and the Division must review and approve this easement before it is recorded. Eventual donation to a local land trust or similar organization is acceptable to DWQ with DWQ's written approval.

The exact location of this 1,145 foot wide mining corridor shall be submitted to DWQ and the Corps of Engineers for written approval. A detailed stratigraphy study shall be done on both sides and throughout the area to be mined in order to determine the presence, extent and permeability of any aquitards and aquicludes (mainly clay-based) within the mining corridor. A plan for restoration of each of these aquitards and aquicludes shall be included with the revegetation plan in order to ensure that pre-mining hydrology is reestablished in the mining corridor. Additional written approval is needed from DWQ before this stratigraphic study is done or restoration is initiated. Groundwater monitoring shall be done before, during and after mining and restoration for at least 10 years post-mining in order to ensure that restoration has established reference hydrology for this site. In addition, a reclamation and revegetation plan for the mining corridor shall be submitted to DWQ for written approval. The reclamation plan for the mining corridor shall include the installation of appropriate topsoil on the site within the rooting zone of the restored hardwood flat. The width of the reclamation zone shall ensure that a continuous hardwood flat is restored to reconnect the two undisturbed hardwood flats with a width similar to the width of the remnant, undisturbed hardwood flats. Revegetation shall be done with native tree species. The mining corridor shall be restored and replanted within ten (10) years of the initiation of mining preparation

- for the area. DWQ shall be copied on a letter once that mining preparation begins on the mining corridor in order to establish this ten year clock.
10. Additional minimization of appx. 3 acres of wetland impact shall be provided for the NCPC tract as depicted on the letter from PCS Phosphate dated November 3, 2008 to John Dorney of the NC Division of Water Quality.
  11. South of 33 tract – The impact boundaries for the South of 33 tract shall be as outlined in an email from Mr. Tom Walker of the US Army Corps of Engineers dated August 19, 2008 (forwarded to Mr. John Dorney of the Division of Water Quality on December 13, 2008).

#### Monitoring

12. Groundwater monitoring – Additional written approval is required from DWQ for a final groundwater monitoring plan that supplements and compliments the existing groundwater monitoring that is being conducted by PCS for various state and federal agencies. In addition to other parameters subject to groundwater standards, cadmium and fluoride shall be monitored in the final groundwater monitoring plan. This plan shall include groundwater monitoring of the protected portion of the Bonneron Road Non-Riverine Wet Hardwood Forest as noted in condition 9 above in order to ensure that the existing hydrology of this site is maintained. This monitoring shall focus on the "58A" area of the Bonneron Road Non-Riverine Wet Hardwood Forest to ensure that its groundwater hydrology is maintained.
13. Stream and watershed monitoring – The existing water management and stream monitoring plan for water quality, water quantity and biology (macroinvertebrates and fish) shall be continued for the life of the Permit by the applicant. Additional monitoring shall be proposed by the applicant and approved by DWQ for tributaries in the Bonneron and South of 33 tracts before land clearing or impacts occur to those locations. This additional monitoring plan shall collect data from a representative number of streams in each tract and be designed to assure the protection of downstream water quality standards including Primary and Secondary Nursery Area functions in tributaries to South Creek, Porter Creek, Durham Creek and the Pamlico River adjacent to the mine site. Monitoring locations shall include the upper end of Porter Creek in the "58A" portion of the Bonneron Road Non-Riverine Wet Hardwood Forest in order to ensure that hydrology of this wet hardwood forest is maintained.

The plan shall identify any deleterious effects to riparian wetland functions including but not limited to water storage, pollutant removal, streambank stabilization, as well as resident wetland-dependent aquatic life and resident wetland-dependent wildlife and aquatic life in wetlands and streams tributary to the Pamlico River in the NCPC, Bonneron and South of 33 tracts. If necessary, management activities to protect or restore these uses will be required for all the tributaries of these three tracts.

PCS shall notify DWQ in writing at least one month in advance of any biological sampling so DWQ biologists can accompany PCS biologists as needed. Also a certified lab is required for the identification of freshwater benthic macroinvertebrate samples. For estuarine samples, a knowledgeable lab shall be used until such time as DWQ certifies laboratories for estuarine analysis and after that time, only suitably certified labs shall be used. Finally a fish monitoring plan shall be included in the final monitoring plan submitted to DWQ for written approval.

January 15, 2009

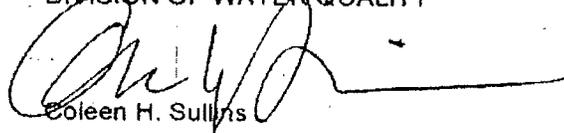
This stream and watershed monitoring plan shall be submitted to DWQ for written approval within six months of the issuance of the 404 Permit. Seven copies (two hard copies and five CD's) of the draft plan and annual reports shall be submitted to DWQ for circulation and review by the public and other federal and state agencies.

Expiration of Certification – This approval to proceed with your approved impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 Permit with the proviso that changes to this Certification may be made in accordance with condition 5 (Continuing Compliance) above.

If this Certification is unacceptable to you, you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this modified Certification. Since as noted above, this Certification completely replaces the one issued to you on December 6, 2008, the sixty (60) day appeal period is for all the conditions of this modified Certification. Any request for adjudicatory hearing must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 15th day of January 2009

DIVISION OF WATER QUALITY



Coleen H. Sullins

CHS/jrd



Michael F. Easley, Governor

William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director  
Division of Water Quality

December 5, 2008

Mr. Ross M. Smith, Manager  
Environmental Affairs  
PCS Phosphate Company, Inc.  
P.O. Box 48  
Aurora, NC 27808

Re: PCS Phosphate Mine Expansion, Beaufort County  
DWQ #2008-0868, version 2.0; USACE Action ID. No. 200110096  
**APPROVAL of 401 Water Quality Certification with Additional Conditions**

Dear Mr. Smith:

Attached hereto is a copy of Certification No. 3771 issued to PCS Phosphate Company, Inc. of Aurora, NC, dated December 5, 2008. In addition, you must get any other federal, state or local permits before you proceed with your project including (but not limited to) Solid Waste, Sediment and Erosion Control, Stormwater, Dam Safety, Mining, Non-discharge and Water Supply Watershed regulations.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen H. Sullins

CHS/jrd

Attachments: Certificate of Completion

cc: Mr. Tom Walker, U.S. Army Corps of Engineers, Asheville Regulatory Field Office  
Dave Lekson, US Army Corps of Engineers, Washington Regulatory Field Office  
Scott McLendon, Wilmington District, USACOE  
Kyle Barnes, DWQ, Washington Regional Office  
Al Hodge, DWQ, Washington Regional Office  
DLR Washington Regional Office  
File Copy  
Matt Matthews, DWQ Wetlands and Stormwater Branch  
Cyndi Karoly, DWQ  
John Payne, NC Attorney General's Office, Environmental Division  
Mike Schafele, NC Natural Heritage Program  
Linda Pearsall, NC Natural Heritage Program

401 Oversight/Express Review Permitting Unit  
1650 Mail Service Center, Raleigh, North Carolina 27699-1650  
2321 Crabtree Boulevard, Suite 250, Raleigh, North Carolina 27604  
Phone: 919-733-1786 / FAX 919-733-6893 / Internet: <http://h2o.enr.state.nc.us/ncwetlands>

One  
North Carolina  
Naturally

An Equal Opportunity/Affirmative Action Employer - 50% Recycled/10% Post Consumer Paper

EXHIBIT 2

Jimmie Overton, DWQ  
Jeff Furness, PCS Phosphate  
Stephen Rynas, NC Division of Coastal Management  
Shannon Deaton, NC Wildlife Resources Commission  
Derb Carter, Southern Environmental Law Center  
Geoffrey Gisler, Southern Environmental Law Center  
Heather Jacobs, Pamlico Tar River Foundation  
Sean McKenna, NC Division of Marine Fisheries  
Eric Kulz, DWQ  
Tammy Hill, DWQ  
Becky Fox, US Environmental Protection Agency  
Tom Welborn, US Environmental Protection Agency – Region 4 Atlanta  
Melba McGee, DENR  
Bill Ross, DENR  
Coleen Sullins, DWQ  
Chuck Wakild, DWQ  
Paul Rawls, DWQ  
Ted Strong, Washington Daily News  
Susan Massengale, DWQ  
Julia Berger, CZR  
George House, Brooks, Pierce, McLendon, Humphrey and Leonard, LLP  
Jim Stanfill, EEP  
Mary Penny Thompson, DENR  
Susan Massengale, DWQ  
Ann Deaton, NC Division of Marine Fisheries  
John Hennessy, DWQ

## NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500 to PCS Phosphate Company, Inc. of Aurora, NC based on an application to fill 4,124 acres of jurisdictional wetlands, 29,288 linear feet of streams and 55.14 acres of stream buffers in the Pamlico River Basin, associated with the expansion of PCS Phosphate's mining operation in Beaufort County, North Carolina, pursuant to an application filed on the 22nd day of May of 2008 through the published Public Notice by the US Army Corps of Engineers, and in additional correspondence received September 5, 2008 (dated September 4, 2008) and November 3, 2008 (received November 5, 2008).

The application and supporting documentation provide adequate assurance that the proposed work will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, the additional correspondence noted above and conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted in the application materials, additional correspondence and as described in the Public Notice. If the property is sold after the Certification is granted, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions of this Certification. Any new owner must notify the Division and request the Certification be issued in their name. Should wetland, buffer or stream fill be requested in the future, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). If any plan revisions from the approved site plan result in a change in stream, buffer or wetland impact or an increase in impervious surfaces, the DWQ shall be notified in writing and a new application for 401 Certification may be required and a modified 401 Certification may be required. For this approval to be valid, compliance with all the conditions listed below is required.

### Conditions of Certification:

#### 1. Impacts Approved

The following impacts are hereby approved as long as all of the other specific and general conditions of this Certification are met. No other impacts are approved including incidental impacts other than listed in this table. Also, please note that these impacts are those approved by DWQ and are only a portion of the impacts that were originally applied for and listed in the Public Notice.

	Amount Approved (Units)	Plan Location or Reference
Streams	18,621 feet	Final EIS, page e and June 6, 2008 submittal to DWQ
404/CAMA Wetlands	3,789 acres	Final EIS, page e and June 6, 2008 submittal to DWQ
Waters	19 acres	Final EIS, page e and June 6, 2008 submittal to DWQ
Buffers	28.14 acres	Final EIS, page e and June 6, 2008 submittal to DWQ

Sediment and Erosion Control:

2. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act or Mining Act of 1971 (as amended).
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the Impacts depicted in the 404/401 Permit Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur.
4. Sediment and erosion control measures shall not be placed in wetlands or waters without prior approval by the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources or locally delegated program has released the project.

Continuing Compliance:

5. PCS Phosphate Company, Inc. shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act), the 401 Water Quality Certification rules (15A NCAC 2H .0500) and any other appropriate requirements of State law and federal law. If the Division determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the Division may reevaluate and modify this Certification to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H .0507(d). Before modifying the Certification, the Division shall notify PCS Phosphate Company, Inc. and the US Army Corps of Engineers,

provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to PCS Phosphate Company, Inc. in writing, shall be provided to the United States Army Corps of Engineers for reference in any Permit issued pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project. This condition is intended to conform with the provisions of 15A NCAC 2H .0507 (d).

Mitigation:

6. Wetland and stream mitigation shall be done as follows and in accordance with mitigation as approved by the US Army Corps of Engineers. DWQ shall be copied on all draft mitigation plans and copied on all annual reporting on mitigation success. In addition, buffer mitigation shall be done in accordance with condition 7 below. In addition, DWQ shall be copied on a final accounting of the amount and type of proposed wetland, stream and buffer mitigation within 60 days of the issuance of the 404 Permit from the US Army Corps of Engineers. Any mitigation done outside the 8-digit HUC where PCS is located should follow the guidance for out of HUC mitigation as described in "Guidance on the Use of Compensatory Mitigation in Adjacent Cataloging Units" dated May 20, 2005 or its update by DWQ. Conservation easements or similar mechanisms to protect these mitigation sites shall be recorded on all mitigation sites to the written satisfaction of the US Army Corps of Engineers.
7. Buffer mitigation shall be conducted by PCS Phosphate at those mitigation sites with riparian buffer credit which total about 23.2 acres of buffer credit. If the Environmental Management Commission approves a flexible buffer mitigation program, then PCS Phosphate may submit a list and description of those sites to DWQ for written approval. If no additional riparian buffer mitigation sites and no flexible buffer mitigation sites are approved by DWQ, then disturbance of buffers in the NCPC, Bonnerton or South of 33 tracts shall not be done beyond the limits of the 2014 mining tract shown on PCS' Project Impact Schedule Year 2008-2016 (generally south of Drinkwater Creek) (see Attachment One). DWQ shall be copied on all buffer mitigation site plans and written approval from DWQ is required for these plans before planting or land grading occurs.
8. Porter Creek enhancement – Additional written approval is required from DWQ for a wetland enhancement and stream restoration plan as well as a monitoring plan for the stream, headwater forest and hardwood flat at the upper end of Porter Creek. This plan shall include plugging or filling the existing ditch in order to reestablish surface flow into the wetland and stream channel. DWQ acknowledges wetland functional uplift for the 3.4 acre hardwood flat that is located between the stream and existing ditch and will count 1.7 acres of functional uplift of these non-riparian wetlands in order to account for DWQ's mitigation requirement in 15A NCAC 2H .0506 (h)(6). Stream mitigation credits are also available for the restoration of flow into the existing channel with appropriate monitoring.

Additional Minimization of Impact:

9. Hardwood Flat Avoidance – Impact to the 135 acre ("135 A" on Attachment Two) portion, the 58 acre (" 58 A" on Attachment Two) portion and the 20 acre secondary connection between these two locations ("20 acre connect" on Attachment Two) of the Bonnerton Road Non-Riverine Wet Hardwood Forest as depicted on Exhibit A of the letter dated October 20, 2008 from George House of Brooks, Pierce, McLendon, Humphrey and Leonard, LLP to Paul Rawls of the NC Division of Water Quality shall be avoided and the area not mined or

cleared since this wetland is a "wetland of exceptional state or national ecological significance" in accordance with 15A NCAC 2H .0506(e). In order to protect the uses of this wetland, a conservation easement shall be placed on the wetland to preclude impacts including mining, logging and any other disturbance of the vegetation or soils that would result in its delisting as a state or nationally significant wetland area. This conservation easement shall be sent to DWQ within 60 days of the issuance of the 404 Permit and the Division must review and approve this easement before it is recorded. The only exception to this avoidance is that a dragline walkpath with a width of no more than 250 feet shall be allowed in order to allow equipment to travel from the northern part of the Bonnerton tract to the southern part of the Bonnerton tract. The exact location of this walkpath shall be submitted to DWQ for written approval. In addition, a revegetation plan for the walkpath shall be submitted to DWQ for written approval and revegetation shall be done with native tree species once the walkpath has been accessed and is no longer needed for equipment access.

10. Additional minimization of appx. 3 acres of wetland impact shall be provided for the NCPC tract as depicted on the letter from PCS Phosphate dated November 3, 2008 to John Dorney of the NC Division of Water Quality.
11. South of 33 tract – The boundaries for the SCR alternative shall be followed for the South of 33 tract.

#### Monitoring

12. Groundwater monitoring – Additional written approval is required from DWQ for a final groundwater monitoring plan that supplements and compliments the existing groundwater monitoring that is being conducted by PCS for various state and federal agencies. In addition to other parameters, cadmium and fluoride shall be monitored in the final groundwater monitoring plan. This plan shall include groundwater monitoring of the protected portion of the Bonnerton Road Non-Riverline Wet Hardwood Forest in order to ensure that the existing hydrology of this site is maintained.
13. Stream and watershed monitoring – The existing water management and stream monitoring plan for water quality, water quantity and biology (macroinvertebrates and fish) shall be continued for the life of the Permit by the applicant. This plan shall be designed to assure the protection of downstream water quality standards including Primary and Secondary Nursery Area functions in all tributaries to South Creek, Porter Creek, Durham Creek and the Pamlico River adjacent to the mine site. Additional monitoring shall be proposed by the applicant and approved by DWQ for tributaries in the Bonnerton and South of 33 tracts before land clearing or impacts occur to those locations.

The plan shall identify any deleterious effects to riparian wetland functions including but not limited to water storage, pollutant removal, streambank stabilization, as well as resident wetland-dependent aquatic life and resident wetland-dependent wildlife and aquatic life in streams tributary to the Pamlico River in the NCPC, Bonnerton and South of 33 tracts. If necessary, management activities to protect or restore these uses will be required for all the tributaries of these three tracts.

PCS shall notify DWQ in writing at least one month in advance of any biological sampling so DWQ biologists can accompany PCS biologists as needed. Also a certified lab is required for the identification of freshwater biological samples. For estuarine samples, a

December 5, 2008

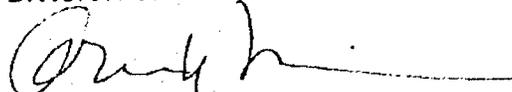
knowledgeable lab shall be used until such time as DWQ certifies laboratories for estuarine analysis and after that time, only suitably certified labs shall be used. Finally a fish monitoring plan shall be included in the final monitoring plan submitted to DWQ for written approval.

This stream and watershed monitoring plan shall be submitted to DWQ for written approval within six months of the issuance of the 404 Permit. Seven copies (two hard copies and five CD's) of the draft plan and annual reports shall be submitted to DWQ for circulation and review by the public and other federal and state agencies.

Expiration of Certification – This approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 Permit with the proviso that changes to this Certification may be made in accordance with condition 5 (Continuing Compliance) above.

If this Certification is unacceptable to you, you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

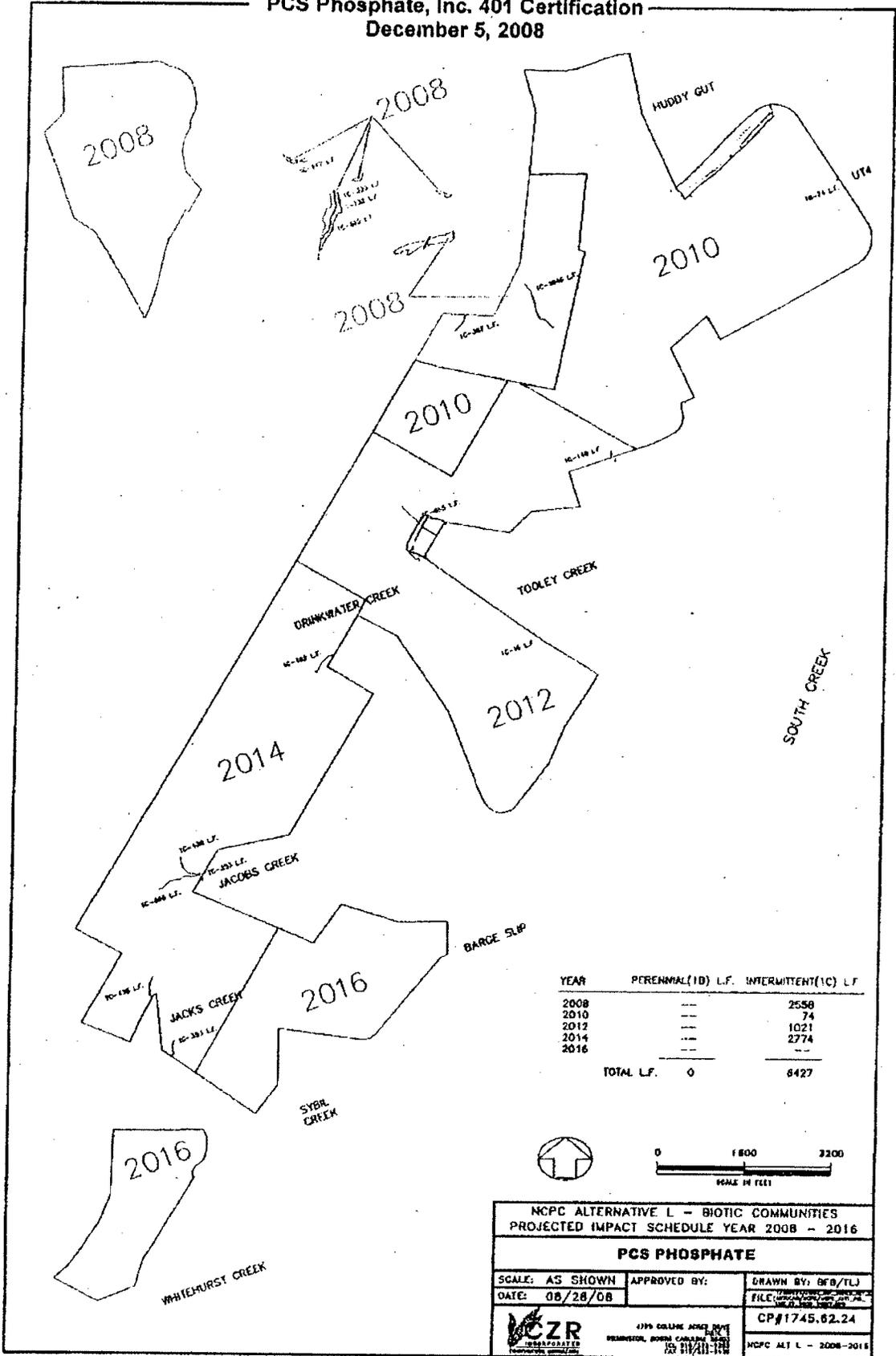
This the 5th day of December 2008  
DIVISION OF WATER QUALITY



Coleen H. Sullins

CHS/jrd

**Attachment One  
Riparian Buffer Mitigation  
PCS Phosphate, Inc. 401 Certification  
December 5, 2008**



YEAR	PERENNIAL (ID) L.F.	INTERMITTENT (IC) L.F.
2008	---	2558
2010	---	74
2012	---	1021
2014	---	2774
2016	---	---
<b>TOTAL L.F.</b>	<b>0</b>	<b>8427</b>

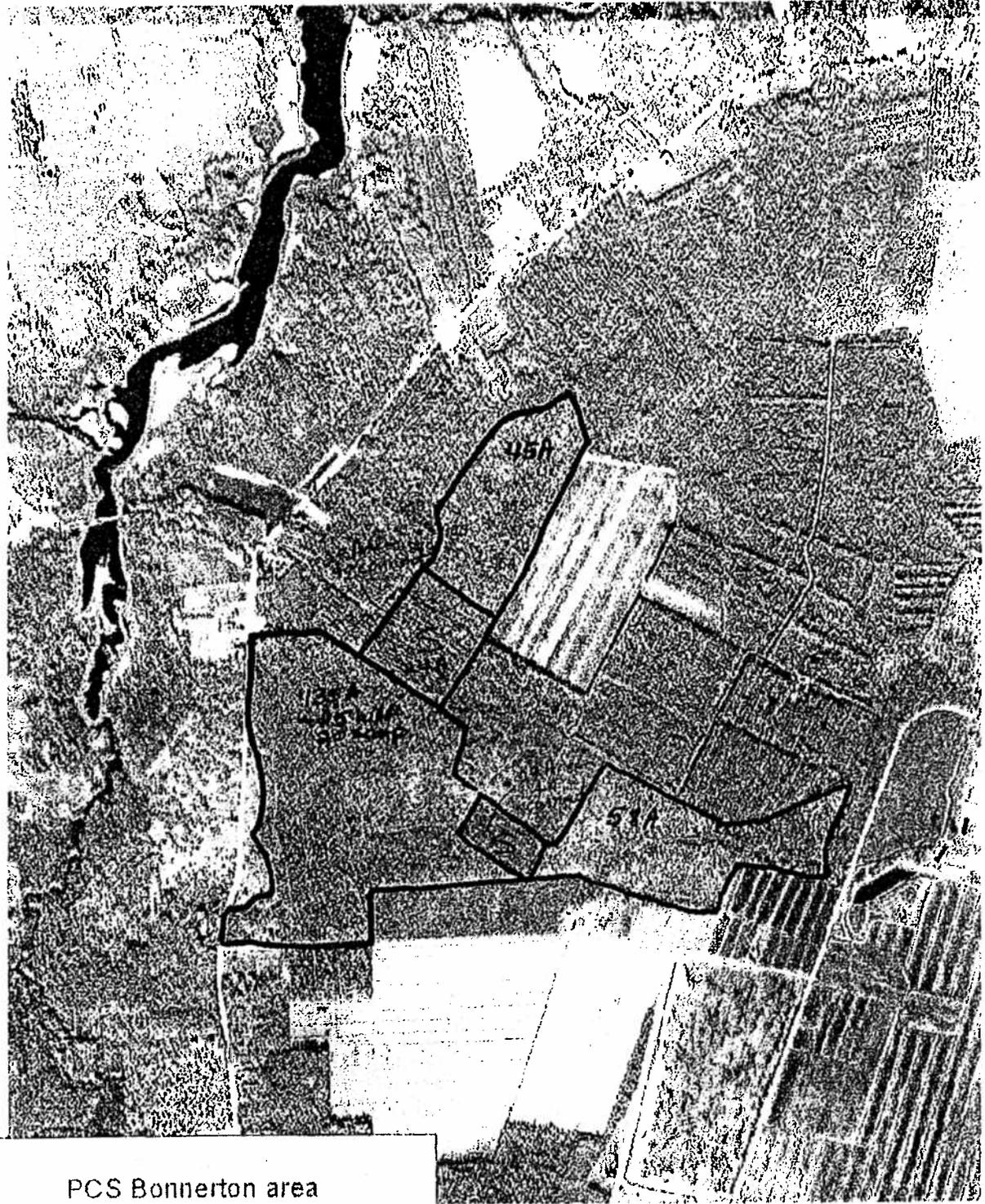


**HCPC ALTERNATIVE L - BIOTIC COMMUNITIES  
PROJECTED IMPACT SCHEDULE YEAR 2008 - 2016**

**PCS PHOSPHATE**

SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: BFB/TLJ
DATE: 08/28/08		FILE: [unclear]
		CP#1745.62.24
<small>1775 COLLING AVENUE SUITE 100 WILMINGTON, DELAWARE 19806 TEL: 302/411-3100</small>		HCPC ALT L - 2008-2016

Attachment Two  
Hardwood Flat Avoidance  
PCS Phosphate, Inc. 401 Certification  
December 5, 2008



PCS Bonnerton area

S = Secondary areas for connection  
Heavy black line = SNHA (sig. nat. heritage area)

**CERTIFICATE OF SERVICE**

I hereby certify that I delivered the foregoing Petition for a Contested Case Hearing, with attachments, by electronic mail and by U.S. mail, first-class postage prepaid, to the following:

Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
[oah.clerks@oah.nc.gov](mailto:oah.clerks@oah.nc.gov)

I further certify that I served the foregoing Petition for a Contested Case Hearing, with attachments, on the following in the manner indicated:

Mary Penny Thompson.  
General Counsel and Registered Agent  
N.C. Department of Environment and  
Natural Resources  
512 North Salisbury St.  
14<sup>th</sup> Floor  
Raleigh, NC 27604  
*Via certified mail*

George W. House  
Brooks, Pierce, McLendon, Humphrey  
& Leonard  
2000 Renaissance Plaza  
230 North Elm Street  
Greensboro, NC 27401  
*Via first-class mail*

PCS Phosphate Company, Inc.  
c/o Corporation Service Company,  
Registered Agent  
327 Hillsborough Street  
Raleigh, NC 27603  
*Via certified mail*

John A. Payne  
Assistant Attorney General  
State of North Carolina  
Dept. Of Justice  
PO Box 629  
Raleigh, NC 27602  
*Via first-class mail*

Ross Smith  
PCS Phosphate Company, Inc.  
PO Box 48  
Aurora, NC 27808  
*Via first-class mail*

This the 12th day of March, 2009.

  
\_\_\_\_\_  
Geoff Cislner  
Southern Environmental Law Center



Sam\_Hamilton@fws.gov  
03/20/2009 10:49 AM

To Stan Meiburg/R4/USEPA/US@EPA  
cc "Jack Arnold" <jack\_arnold@fws.gov>, "David Viker"  
<david\_viker@fws.gov>, "Jeff Weller"  
<jeff\_weller@fws.gov>, "Mrs. Tauline Davis"  
bcc

Subject Re: PCS elevation

History: ↪ This message has been replied to and forwarded.

Got it. Yes we are. Will send it to you today when its signed. I'm in dc.  
Sam

----- Original Message -----  
From: Meiburg.Stan  
Sent: 03/20/2009 10:45 AM AST  
To: Sam Hamilton  
Subject: PCS elevation

Sam, you should have received a cc of our PCS elevation letter which I signed on Tuesday. If you haven't seen it, please let me know.

Are you still planning to elevate today? If so, could I get a copy of your letter?

Thanks!

Stan  
A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA. 30303

Office: (404) 562-8357  
Fax: (404) 562-9961  
Cell: (404) 435-4234  
Email: meiburg.stan@epa.gov

Sent using Blackberry

Stan Meiburg /R4/USEPA/US  
03/20/2009 11:01 AM

To "Jim Giattina" <giattina.jim@epa.gov>, "Scott Gordon"  
<gordon.scott@epa.gov>, Tom Welborn, "Allison Wise"  
<wise.allison@epa.gov>  
cc "Rebecca Cover" <cover.rebecca@epa.gov>

bcc

Subject Fw: PCS elevation

Fyi  
A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA. 30303

Office: (404) 562-8357  
Fax: (404) 562-9961  
Cell: (404) 435-4234  
Email: meiburg.stan@epa.gov

Sent using Blackberry

----- Original Message -----

From: Sam\_Hamilton  
Sent: 03/20/2009 10:49 AM AST  
To: Stan Meiburg  
Cc: "Jack Arnold" <jack\_arnold@fws.gov>; "David Viker" <david\_viker@fws.gov>;  
"Jeff Weller" <jeff\_weller@fws.gov>; "Mrs. Tauline Davis"  
<Tauline\_Davis@fws.gov>; "Merry Bates" <merry\_bates@fws.gov>; "Cindy Dohner"  
<Cynthia\_Dohner@fws.gov>  
Subject: Re: PCS elevation

Got it. Yes we are. Will send it to you today when its signed. I'm in dc.  
Sam

----- Original Message -----

From: Meiburg.Stan  
Sent: 03/20/2009 10:45 AM AST  
To: Sam Hamilton  
Subject: PCS elevation

Sam, you should have received a cc of our PCS elevation letter which I  
signed on Tuesday. If you haven't seen it, please let me know.

Are you still planning to elevate today? If so, could I get a copy of  
your letter?

Thanks!

Stan

A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA. 30303

Office: (404) 562-8357  
Fax: (404) 562-9961  
Cell: (404) 435-4234  
Email: meiburg.stan@epa.gov

Sent using Blackberry



sam\_hamilton@fws.gov  
Sent by:  
Tauline\_Davis@fws.gov

03/20/2009 01:47 PM

To Stan Meiburg/R4/USEPA/US@EPA  
cc  
bcc

Subject Letter on Higher Level Review Request/Permit 200110096

History:

↳ This message has been forwarded.

Good afternoon - Please see the attached letter on a recommendation to request a higher level review for Department of Army Permit AID 200110096, Potash Corporation of Saskatchewan Phosphate Division, Aurora Operation (PCS) Mine Continuation. Thank you.

  
DOC20090320134023.pdf



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

1875 Century Boulevard  
Atlanta, Georgia 30345

In Reply Refer To  
FWS/R4/ES

MAR 20 2009

Colonel Jefferson M. Ryscavage  
District Engineer, Wilmington District  
U.S. Army Corps of Engineers  
69 Darlington Avenue  
Wilmington, North Carolina 28403-1343

Subject: Recommendation to Request a Higher Level Review for Department of Army Permit AID 200110096, Potash Corporation of Saskatchewan Phosphate Division, Aurora Operation (PCS) Mine Continuation

Dear Colonel Ryscavage:

We have received your Notice of Intent to Proceed on the proposed Department of the Army Permit AID 200110096, The Aurora Operation (PCS) Mine Continuation, dated March 2<sup>nd</sup> and received at USFWS Region 4 on March 5, 2009. Pursuant to Paragraph 3(d)(2) of the Memorandum of Agreement (MOA) between the Department of the Interior and the Department of Army, under Clean Water Act Section 404 (q) Part IV, I am requesting a review of this permit by the Acting Assistant Secretary of Fish and Wildlife and Parks, Department of the Interior, and recommending that he request review of the permit by the Assistant Secretary of the Army for Civil Works. During this review, the permit should be held in abeyance pending completion of the review process pursuant to the MOA Part IV, Paragraph 3(e).

The USFWS remains concerned that the proposed project will result in unacceptable adverse impacts to aquatic resources of national importance, including direct and indirect impacts to waters of the U.S. which support the Albemarle Pamlico National Estuary Program area. The proposed project will have direct impacts to 3,953 acres of wetlands and 45,494 linear feet of stream, including a portion of a designated Significant Natural Heritage Area. The impacts also include a loss of approximately 70 percent of the watershed areas within the proposed project boundaries. The project will adversely affect the Albemarle Pamlico Complex and those effects have not yet been adequately addressed. In addition to the need to further avoid and minimize impacts to the site's high value aquatic resources, there are concerns regarding the adequacy of the proposed compensatory mitigation to offset any authorized impacts.

We recognize the desire for timely decision making on this permit. We have worked closely with your staff and have offered our comments throughout the Environmental Impact Statement and 404 permitting process, and we appreciate the efforts by both you and the applicant to address them. Still, critical issues about the impact of this project remain unresolved and based

**TAKE PRIDE  
IN AMERICA** 

Colonel Ryscavage

on the concerns cited above; we do not support issuance of the permit for the project as currently proposed. Therefore, pursuant to the procedures and timelines in the national 1992 Memorandum of Agreement with the Corps of Engineers, we are seeking review by Acting Assistant Secretary Fish and Wildlife and Parks, Department of the Interior and the Assistant Secretary for Civil Works.

Please contact Pete Benjamin, Field Supervisor, Raleigh Ecological Services, at (919) 856-4520, extension 11 for further information, and we look forward to continuing our dialogue as we move forward.

Sincerely Yours,



*for* Sam D. Hamilton  
Acting Regional Director

Stan Meiburg/R4/USEPA/US  
03/20/2009 04:51 PM

To Tom Welborn, "Jim Giattina" <giattina.jim@epa.gov>  
cc "Scott Gordon" <gordon.scott@epa.gov>, "Allison Wise"  
<wise.allison@epa.gov>  
bcc  
Subject Fw: Letter on Higher Level Review Request/Permit  
200110096

Well, I had started to forward this letter to you but I see you've already gotten it.

Tom, I ran into Sam in the airport -- I've debriefed Jim on that (also included discussion on Savannah Harbor).

Also, Tom, I am hoping you'll come with me to the hearing on the 31st.

Stan  
A. Stanley Meiburg  
Acting Regional Administrator  
EPA Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA. 30303

Office: (404) 562-8357  
Fax: (404) 562-9961  
Cell: (404) 435-4234  
Email: meiburg.stan@epa.gov

Sent using Blackberry

**From:** sam\_hamilton  
**Sent:** 03/20/2009 01:47 PM AST  
**To:** Stan Meiburg  
**Subject:** Letter on Higher Level Review Request/Permit 200110096

Good afternoon - Please see the attached letter on a recommendation to request a higher level review for Department of Army Permit AID 200110096, Potash Corporation of Saskatchewan Phosphate Division, Aurora Operation (PCS) Mine Continuation. Thank you.

  
  
D0000090220134020.pdf



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

1875 Century Boulevard  
Atlanta, Georgia 30345

In Reply Refer To  
FWS/R4/ES

MAR 20 2009

Colonel Jefferson M. Ryscavage  
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U.S. Army Corps of Engineers  
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TAKE PRIDE  
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Colonel Ryscavage

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Sincerely Yours,



For / Sam D. Hamilton  
Acting Regional Director



Cynthia\_Dohner@fws.gov

03/22/2009 07:21 PM

To Sam\_Hamilton@fws.gov

cc Stan Meiburg/R4/USEPA/US@EPA,  
Tauline\_Davis@fws.gov

bcc

Subject Re: Letter on Higher Level Review Request/Permit  
200110096

Hey, TYVM for the message - I'm now ready to drive to NC and I hate to  
drive :(

Sam  
Hamilton/R4/FWS/D  
OI  
Sent by: Tauline  
Davis

meiburg.stan@epa.gov

To

cc

03/20/2009 01:47  
PM

Subject  
Letter on Higher Level Review  
Request/Permit 200110096

Good afternoon - Please see the attached letter on a recommendation to  
request a higher level review for Department of Army Permit AID 200110096,  
Potash Corporation of Saskatchewan Phosphate Division, Aurora Operation  
(PCS) Mine Continuation. Thank you.

[attachment "DOC20090320134028.pdf" deleted by Cynthia Dohner/R4/FWS/DOI]



"Dixon, Lester S SAD"  
<Lester.S.Dixon@usace.army  
.mil>

03/23/2009 11:22 AM

To <cynthia\_dohner@fws.gov>, Stan  
Meiburg/R4/USEPA/US@EPA, <Roy.Crabtree@noaa.gov>

cc

bcc

Subject 404 Permit for PCS Phosphate

History:  This message has been replied to.

Cindy, Stan, and Roy

This is a courtesy heads up note on an ongoing high visibility permit action.

Our respective staffs are meeting in NC on Tuesday to review a PCS Phosphate Permit. Stan, it is my understanding, EPA plans to elevate the proposed permit decision. Cindy, we received a fax from the USFWS stating plans to also elevate the permit action. We will continue to work at the field level with USFWS, NMFS and EPA to come to a resolution on the outstanding issues.

The meeting will be held at the Fish and Wildlife Service office in Raleigh, NC. We are holding meeting in Raleigh to accommodate those flying in from Atlanta, Charleston, and DC. Here's the list of attendees:

USACE: Ken Jolly & Tom Walker (Wilmington District); Arch Middleton (SAD)  
EPA Region IV: Tom Welborn (Atlanta); Becky Fox (Local); Palmer Hough and Brian Frazer (Washington, DC)  
FWS: Pete Benjamin (Field Supervisor, Local); Mike Wicker (Local)  
NMFS: Pace Wilber (Field Supervisor, Charleston, SC); Ron Sechler (Local)

If you have any questions or suggestions, please do not hesitate to give me a call.

Best regards,

Les Dixon  
Director of Programs  
South Atlantic Division  
US Army Corps of Engineers  
Ph 404 562 5200  
Cell 404 606 0816



"Reid Wilson"  
<reid@ctnc.org>  
03/26/2009 12:27 PM

To Stan Meiburg/R4/USEPA/US@EPA,  
<meiburg.stanley@epa.gov>, Allison  
Wise/R4/USEPA/US@EPA

cc

bcc

Subject Thank you!

Hi Stan and Allison,

I woke up this morning to read that EPA R4 is taking a stand against the ridiculous PCS Phosphate mine proposal. Thank God someone (you) has some sense left. This would be a horrible project as currently envisioned and I can't believe the new administration here didn't look at it in any depth before coughing it out during its first week in office. Please keep a firm backbone on this one!!! Hope you're both doing great.

Reid

Reid Wilson  
Executive Director  
Conservation Trust for North Carolina  
1028 Washington Street  
Raleigh, NC 27605  
919-828-4199  
919-828-4508 (f)  
919-696-0368 (c)  
reid@ctnc.org

Please visit [www.ctnc.org](http://www.ctnc.org) to find out how the Conservation Trust for North Carolina and 24 local land trusts save the places you love.

*CONFIDENTIALITY NOTICE: This email and any replies thereto are covered by the Electronic Communications Privacy Act, 18 U.S.C. Sections 2510-2521 and are legally privileged. This information is confidential information and is intended only for the use of the individual(s) or entity (entities) named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited.*



"Pace.Wilber"  
<Pace.Wilber@noaa.gov>  
03/30/2009 04:24 PM

To Jim Giattina/R4/USEPA/US@EPA  
cc arthur.l.middleton@usace.army.mil,  
william.t.walker@usace.army.mil,  
samuel.k.jolly@usace.army.mil,  
bcc

Subject Re: Follow-up to March 24 Meeting re PCS

Hello everyone.

At the close of the meeting last Tuesday, NMFS offered to capture into a GIS the lines that were drawn for the NCPC and Bonnerton tracts and distributed in hard copy. The attached zip file contains three sets of shapefiles, one set for NCPC and two sets for Bonnerton (north and south). The attached pdf shows these lines in purple relative to the GIS data provided to us in January by CZR. Please note the area indicated for the NCPC tract is a bit larger than what was provided last Tuesday. This increase in area of the proposed mine reflects clarification of conversations between EPA and NGOs. The approximate area of this addition is shown in the pdf. Questions about that clarification should be directed to EPA since they were the agency that participated in the original and follow-up conversations. I would be happy to answer any questions you have about how the hard copies distributed last week were formatted for a GIS.

Pace

Giattina.Jim@epamail.epa.gov wrote:

- > Ken, Tom W, Arthur, David, Ross, Jeff, Tom R, and George:
- >
- > We want to thank everyone again for participating in Tuesday's meeting.
- > We found the discussions very productive. A number of action items were
- > identified at the end of the meeting. I would like to capture that
- > list, identify the lead for each action, and provide you with the status
- > of actions which EPA/NMFS/FWS are responsible for. According to my
- > notes, we identified the following four actions:
- >
- > 1) EPA in coordination with FWS and NMFS will provide GIS coverages
- > identifying the proposed "EPA/FWS/NMFS" mining boundaries for the NCPC
- > and Bonnerton tracts presented yesterday (the boundary for S33 continues
- > to be the boundary certified by the State). We will forward this
- > information to you on Monday 3/30.
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- > 2) FWS will provide language describing the reclamation provisions
- > discussed on 3/24. We will forward this information to you on Monday
- > 3/30.
- >
- > 3) NMFS will provide the language describing the monitoring provisions
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- >
- > 4) Once it receives the GIS coverages, PCS will evaluate the economic
- > viability of the EPA/FWS/NMFS alternative and share its results with the
- > agencies.
- >
- > In addition to expanded impact avoidance and improved reclamation and
- > monitoring provisions, the EPA/FWS/NMFS alternative also includes
- > measures to ensure that avoided aquatic resources are provided long-term
- > protections from future mining with the appropriate binding real estate

> instrument. As discussed on 3/24, we suggest the use of conservation  
> easements. As noted on 3/24, we are also open to discussion regarding  
> compensatory mitigation credit for the protection of these avoided  
> areas. We welcome your recommendations regarding the appropriate level  
> of compensation credit for the preservation, enhancement, and/or  
> restoration of avoided aquatic resources.  
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> formal elevation of the Corps' proposed permit for the alternative known  
> as "Modified Alternative L" that was certified by the State. Although  
> not discussed on 3/24, we would like to organize a site visit for agency  
> officials who would be involved in the review of this elevated permit  
> decision. We would like to know your availability on April 27 and the  
> morning of April 28.  
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> Please let me know if I you have any changes to the action item list and  
> indicate your availability for a site visit. Again thank you for  
> participating in yesterday's meeting.  
>  
> Thanks, Jim  
>  
>  
>

--

-----  
Pace Wilber, Ph.D.  
Atlantic Branch Chief, Charleston (F/SER47)  
Southeast Regional Office, NOAA Fisheries  
PO Box 12559  
Charleston, SC 29422-2559

843-953-7200  
FAX 843-953-7205  
pace.wilber@noaa.gov

<http://sero.nmfs.noaa.gov/dhc/habitat.htm>

\*\*\*\*\* ATTACHMENT NOT DELIVERED \*\*\*\*\*

This Email message contained an attachment named  
PCS\_30March2009.zip  
which may be a computer program. This attached computer program could  
contain a computer virus which could cause harm to EPA's computers,  
network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced  
into the EPA network. EPA is deleting all computer program attachments  
sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you  
should contact the sender and request that they rename the file name  
extension and resend the Email with the renamed attachment. After  
receiving the revised Email, containing the renamed attachment, you can  
rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

\*\*\*\*\* ATTACHMENT NOT DELIVERED \*\*\*\*\*



PCS\_30March2009.pdf



"Pace.Wilber"  
<Pace.Wilber@noaa.gov>  
03/30/2009 05:28 PM

To Jim Giattina/R4/USEPA/US@EPA  
cc arthur.l.middleton@usace.army.mil,  
william.t.walker@usace.army.mil,  
samuel.k.jolly@usace.army.mil,  
bcc

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Draft monitoring language is attached.

Pace

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Pace Wilber, Ph.D.  
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Southeast Regional Office, NOAA Fisheries  
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Charleston, SC 29422-2559

843-953-7200  
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pace.wilber@noaa.gov

<http://sero.nmfs.noaa.gov/dhc/habitat.htm>



"Pace.Wilber"  
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03/31/2009 09:21 AM

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cc arthur.l.middleton@usace.army.mil,  
william.t.walker@usace.army.mil,  
samuel.k.jolly@usace.army.mil,  
bcc

Subject Re: Follow-up to March 24 Meeting re PCS

Apologies to all . . . referenced attachment is now attached.

Pace.Wilber wrote:

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>

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>

> Pace

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FAX 843-953-7205  
pace.wilber@noaa.gov

<http://sero.nmfs.noaa.gov/dhc/habitat.htm>



PCSMentoring30March2009.doc

## Recommendations for the Monitoring of Impacts to Primary Nursery Areas

### Background

Throughout reviews of the proposal by PCS to expand its mine into the NCPC, Bonnerton, and S33 tracts, resource agencies expressed concerns over direct and indirect impacts to creeks that function as nursery areas for estuarine and marine fauna. South Creek, which borders the NCPC tract, is designated by the State of North Carolina as a Special Secondary Nursery Area, and the NC Division of Marine Fisheries has jurisdiction over this aspect of South Creek. Three creeks that discharge into South Creek from the NCPC tract, Tooley, Jacobs, and Jacks Creeks, and one creek that borders the Bonnerton tract, Porters Creek, are designated as Inland Primary Nursery Areas (PNAs) and are under the jurisdiction of the NC Wildlife Resources Commission. At the federal level under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), these creeks are Habitat Areas of Particular Concern, which is the highest level of protection afforded by the Magnuson-Stevens Act, and wetlands that serve as headwaters of those creeks are essential fish habitat (EFH) under the Magnuson-Stevens Act.

While the footprint of the proposed mine does not extend into the PNAs, the resource agencies are concerned that the extensive mining of wetlands that serve as the headwaters of these creeks may impair the function of these PNAs. Accordingly, a monitoring program coupled with an adaptive management process is proposed to gauge the impacts to the PNAs from the mining so that appropriate adjustments can be made to mine operations. By "appropriate adjustments," we simply mean compliance reviews common for permits that authorize projects of this size and duration, and recognition of the inevitable uncertainties at the time of permitting about how large projects affect the landscape, and vice versa. Similar monitoring should be part of the mitigation and reclamation activities so that the expected benefits from these activities can be evaluated. The monitoring program and adaptive management process described below are viewed as consistent with the recently issued water quality certification to the extent that the water quality certification describes the monitoring. PCS has six months to flesh out the monitoring program required by the water quality certification. We expect a single monitoring and adaptive management program would meet the requirements of state and federal authorizations.

### Proposed Permit Conditions

#### *Monitoring of Affected Creeks and Streams*

PCS shall develop and implement a plan of study to address the effects of a reduction in headwater wetlands on the utilization of Porters Creek, Tooley Creek, Jacobs Creek, Drinkwater Creek, and Jacks Creek as nursery areas by resident fish and appropriate invertebrate species and on all other creeks and streams whose headwaters are reduced 10% or more by mine expansion. This plan shall be submitted to NMFS, US FWS, NCWRC, NCDMF, NCDWQ, NCDLR for review and approval prior to initiation of land clearing activities in the headwater wetlands of PNAs within the NCPC tract. PCS shall make the plan publicly available for comment at the time it submits the plan to the reviewing agencies and shall provide individual notice of the plan to those persons that request notice. The plan shall identify reference creeks (at least four – the usefulness of Muddy Creek as a reference creek should be reevaluated, not assumed); sampling stations, schedules, and methods; laboratory methods; data management and analysis; and quality control and quality assurance procedures.

Monitoring under the plan shall begin 10 years before land clearing is anticipated. For those streams with impacts expected to occur within the first 10 years of the mine expansion, monitoring shall begin as soon as possible following plan approval. Monitoring shall continue for 30 years following completed reclamation (to match North Carolina's solid waste monitoring requirements).

At a minimum, the plan shall address the following issues and include the following data collection:

1. Has mining altered the amount or timing of water flows within the creeks?
  - Continuous water level recorders to measure flow
  - Rain gauges to measure local water input
  - Groundwater wells to measure input to the creeks
  - Continuous salinity monitoring
  - Periodic DO monitoring (continuously monitored for several days at strategic times of year)
  
2. Has mining altered the geomorphic or vegetative character of the creeks?
  - Aerial photography to determine creek position, length, width, sinuosity (annual)
  - Cross section of creeks at key locations (annual)
  - Sediment characteristics (texture, organic content, and contaminants) (annual)
  - Vegetation (percent cover by species) along the creek to determine zonation changes and invasions (spring and fall)
  - Sediment chlorophylls or organic content in vegetation zone (spring and fall)
  - Determination of location of flocculation zones with each creek (spring and fall)
  - Erosion of overburden cap that forms the streambed banks in any reconnected stream system (spring and fall)
  
3. Has mining altered the forage base of the creeks?
  - Benthic cores to sample macroinfauna (spring and fall)
  - Benthic grabs focused upon bivalves, such as *Rangia* sp. (spring and fall)
  - Net samples for grass shrimp, blue crabs, and small forage fish (such as *Fundulus* spp.); sampling gears would be chosen to reflect ontogenetic shifts in creek usage (monthly)
  
4. Has mining altered the use of the creeks by managed fish?
  - Life-stage specific sampling based on time year, sampling gears would be chosen to reflect ontogenetic shifts in creek usage. (monthly or seasonally)
  
5. Do creek sediments include contaminants at levels that could impact fish or invertebrates?
  - Creeks would be sampled for metals, including cadmium, mercury, silver, copper, and arsenic (annual)
  - Availability and uptake by appropriate aquatic species (e.g., *Rangia* sp., blue crabs) should be measured using appropriate bioassay techniques (annual)
  - Effect on heavy metal concentrations in bottom sediments of connecting reclaimed areas to downstream creeks (e.g. Whitehurst Creek) (annual)

#### *Groundwater Monitoring*

- Groundwater monitoring wells should be placed in reclamation areas and peripheral areas. Number and location of wells shall be determined in consultation with the North Carolina Department of Environment and Natural Resources (Department).
- Groundwater monitoring should commence with weekly samples for a period of 5 years to generate an acceptable baseline. After 5 years, monthly monitoring is acceptable.
- Monitoring must continue for 30 years post reclamation. The post-reclamation time period can be lengthened by the Department.
- If elevated levels of heavy metals are detected, monitoring should continue to be conducted weekly.
- At a minimum, heavy metals, including cadmium, arsenic, and chromium should be analyzed. Other parameters may be added per the discretion of the Department.
- PCS shall develop a remediation strategy for heavy metal contamination of groundwater and tributaries that drain or are adjacent to mined areas. That strategy must be made available for public review and comment before approval by the Department.

### *Monitoring of Reclaimed Areas*

PCS's monitoring plan must include specific conditions that measure the viability of capping and top soil cover approaches. Those conditions must include measurable standards and regular inspection intervals. The plan should further include an evaluation of the following characteristics:

- Physical conformation (to measure the rates of settling and erosion, the resulting changes in conformation)
- Patterns in overall water balance and groundwater levels
- Soil profile development and quality (especially looking for toxicants)
- Vegetative community development patterns
- Animal use patterns, along with some body burden testing for resident animals as sentinels for cadmium movement.

### *Adaptive Management*

PCS shall establish an independent panel of scientists and engineers to annually evaluate whether direct and indirect impacts from mining and benefits from the compensatory mitigation are in accordance with expectations at the time of permitting. The panel shall meet during January or February of each calendar year and shall review data collected through the previous calendar year. By March 31, the panel shall provide the Wilmington District and PCS with recommended changes to the mining and mitigation that are necessary to bring the project into alignment with expectations. Every fifth year, the panel shall review the monitoring methods, sampling locations, parameters analyzed, and other elements of monitoring protocol to determine if modifications to the plan are appropriate. The Wilmington District will consider this information and comments from resource agencies to determine if corrective actions or permit modifications are needed. If the panel concludes and the Wilmington District agrees that the mine expansion has caused significant adverse environmental impacts that are not offset by mitigation, then corrective action shall be taken. All data, reports, and presentations reviewed by the panel shall be placed and maintained on a publically accessible internet site.