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July 7, 2008

**VIA FEDERAL EXPRESS**

Patrick A. Moulding, Esq.  
U.S. Nuclear Regulatory Commission  
Office of the General Counsel  
1155 Rockville Pike, Stop O-15 D21  
Washington, D.C. 20852-0001

**Re: Production of Southern Nuclear's Ninth Supplemental Disclosures  
Docket No. 52-011-ESP**

Dear Mr. Moulding:

As you requested during our telephone conversation, enclosed is a CD containing the documents disclosed in Southern Nuclear's Ninth Supplemental Disclosures of June 4, 2008. Also enclosed is an attachment that includes updated document descriptions and the beginning and ending bates number references of the documents being provided.

As previously discussed, we have redacted out certain portions of some of the attached documents that we deemed either not relevant to the admitted contentions or subject to attorney-client/work product protections. In addition, upon further review we have determined that document SNC569 is an attorney-client communication. Therefore, this document is not being produced. To the extent any of the documents produced herein relate to attorney-client communications or related work product, the production of the attached documents shall not be deemed a waiver of any attorney-client/work product protections or the stipulations agreed to in the ASLB's April 3, 2007 order.

If you have any questions regarding the enclosed documents, please contact me.

Sincerely,

K.C. Hairston

KCH/dkf

Attachments

Document No.	Beginning Bates	Ending Bates	Document Name	Document Date	Source	Document Type
SNC562	VESP_D0000287	VESP_D0000288	E-mail from Kevin Walden to Matthew Montz regarding hydraulic zone influence study.	5/5/2008	Southern Nuclear	E-mail
SNC563	VESP_D0000289	VESP_D0000290	E-mail from Jonathan Ponstein to Matthew Montz et al. regarding hydraulic zone influence study.	5/9/2008	Southern Nuclear	E-mail
SNC564	VESP_D0000291	VESP_D0000292	E-mail from William K. Parker to Matthew Montz et al. regarding testing procedures.	5/8/2008	Southern Nuclear	E-mail
SNC565	VESP_D0000293	VESP_D0000295	E-mail from Matthew Montz to John Downing regarding fish entrainment sampling techniques.	4/3/2008	Southern Nuclear	E-mail
SNC566	VESP_D0000296	VESP_D0000296	E-mail from Tom Moorer to Matthew Montz regarding I&E Sampling.	3/21/2008	Southern Nuclear	E-mail
SNC567	VESP_D0000297	VESP_D0000298	E-mail from Phil Moore to Matthew Montz regarding Savannah River fish studies.	5/21/2008	Southern Nuclear	E-mail
SNC568	VESP_D0000299	VESP_D0000302	E-mail from Matthew Montz to Kevin Walden regarding impingement and entrainment monitor Trip Report 3.	4/24/2008	Southern Nuclear	E-mail
SNC570	VESP_D0000305	VESP_D0000319	E-mail from Matthew Montz to D'Andre Manigo regarding impingement and entrainment monitor Trip Report 4 and related field study sheets.	5/6/2008	Southern Nuclear	E-mail
SNC571	VESP_D0000320	VESP_D0000331	E-mail from Matthew Montz to D'Andre Manigo regarding impingement and entrainment monitor Trip Report 5 and related field study sheets.	5/13/2008	Southern Nuclear	E-mail
SNC572	VESP_D0000332	VESP_D0000332	E-mail from Kenneth Middlebrooks to Anthony Dodd et al. regarding work at river intake.	4/3/2008	Southern Nuclear	E-mail
SNC573	VESP_D0000333	VESP_D0000333	E-mail from Kenneth Middlebrooks to Anthony Dodd et al. regarding work at river intake.	4/17/2008	Southern Nuclear	E-mail
SNC574	VESP_D0000334	VESP_D0000335	E-mail from D'Andre Manigo to Matthew Montz regarding sampling at intake canal.	3/24/2008	Southern Nuclear	E-mail
SNC575	VESP_D0000336	VESP_D0000337	E-mail from Ken Dyar to Anthony Dodd et al. regarding work at river water intake structure.	4/3/2008	Southern Nuclear	E-mail
SNC576	VESP_D0000338	VESP_D0000338	E-mail from Anthony Dodd to Kevin Walden and Matthew Montz regarding entrainment sampling.	4/3/2008	Southern Nuclear	E-mail
SNC577	VESP_D0000339	VESP_D0000341	E-mail from Anthony Dodd to Kenneth Middlebrooks et al. regarding work at the river water intake structure.	4/3/2008	Southern Nuclear	E-mail
SNC578	VESP_D0000342	VESP_D0000363	E-mail from Anthony Dodd to Matthew Montz regarding field data sheets.	4/3/2008	Southern Nuclear	E-mail
SNC579	VESP_D0000364	VESP_D0000378	E-mail from Anthony Dodd to Matthew Montz et al. regarding field data sheets.	4/16/2008	Southern Nuclear	E-mail

July 7, 2008  
Attachment A

Vogle ESP  
Southern Nuclear

Ninth Supplemental Disclosures

Document No	Beginning Bates	Ending Bates	Document Name	Document Date	Source	Document Type
SNC580	VESP_D0000379	VESP_D0000379	E-mail from Anthony Dodd to Kenneth Middlebrooks et al. regarding entrainment sampling.	5/15/2008	Southern Nuclear	E-mail
SNC581	VESP_D0000380	VESP_D0000386	E-mail from Hannah Proctor to Anthony Dodd regarding river samples.	5/22/2008	Normandeau Associa	E-mail
SNC582	VESP_D0000387	VESP_D0000391	E-mail from Matthew Montz to Gary Dye regarding nautical charts.	5/5/2008	Southern Nuclear	E-mail

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**From:** Walden, Kevin C.  
**Sent:** Monday, May 05, 2008 10:44 AM  
**To:** Montz, Matthew Thomas  
**Subject:** RE: Vogtle HZI

That's fine. As long as they don't enter the intake structure they are still on public lands and can test whatever they want to test. They won't have any problems from us.

*Kevin Walden*

---

**From:** Montz, Matthew Thomas  
**Sent:** Monday, May 05, 2008 11:23 AM  
**To:** Dyar, Ken C.; VNP Dispatchers; Kitchens, Cohen J.; Manigo, D'Andre; Walden, Kevin C.  
**Cc:** Moorer, Tom C.; Daniel, W. Ellie; Tamplin, Doug E.; Hargis, T. Scott; Pierce, Chuck R.; Davis, James T.; McCracken, Michael W. (Vogtle); McQuillen, Thomas; McCallum, Thomas O.; Goodwin, Don G.; Lee, Greg; Page, Fred I.; Sieweke, John M.; Shores, Bruce Sterling, Jr.; Ponstein, Jonathan B.  
**Subject:** FW: Vogtle HZI

This Wednesday, May 7, 2008, John Sieweke and Bruce Shores with Alabama Power will be working on the Savannah River in close proximity to the Vogtle river water makeup canal. John and Bruce will be performing a hydraulic zone of influence determination. This work is part of our continuing evaluation of impingement and entrainment at the Unit 1 and 2 intake structure. They will be working on the river close to the mouth of the intake canal but will not enter the intake canal or need access to the Plant site.

If you have any questions please call me at 8-992-5629.

Thanks,  
**Matthew T. Montz**  
Southern Nuclear  
Office 205-992-5629

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**From:** Ponstein, Jonathan B.  
**Sent:** Tuesday, April 22, 2008 10:45 AM  
**To:** Montz, Matthew Thomas  
**Cc:** Sieweke, John M.; Shores, Bruce Sterling, Jr.  
**Subject:** RE: Vogtle HZI

Matt,  
John Sieweke and Bruce Shores will be performing this work in the river near the intake structure on the morning of Wednesday May 7th. The field collection will take most of the day. Let me know if you require any additional information for security or otherwise.

Jon Ponstein, P.E.  
Alabama Power Company  
Environmental Affairs  
Laboratory and Field Services  
(office) 8-255-6459  
(cell) 205-438-3568

**From:** Montz, Matthew Thomas  
**Sent:** Monday, April 21, 2008 10:12 AM  
**To:** Ponstein, Jonathan B.  
**Cc:** Garrett, William E., Jr.  
**Subject:** Vogtle HZI

Several weeks ago, we discussed performing the HZI determination at Vogtle during the week of May 5. Is that date still good?

**Matthew T. Montz**  
Environmental Specialist  
Southern Nuclear Operating Company  
Office 205-992-5629

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**From:** Ponstein, Jonathan B.  
**Sent:** Friday, May 09, 2008 3:14 PM  
**To:** Montz, Matthew Thomas  
**Cc:** Moore, Donald L.  
**Subject:** RE: HZI

Actually, I am trying to get the aerial photo images to use in ArcView. Do you know how I can access this information? I heard it is out there but it is a security issue. Donald Moore is my APC contact and who usually gets me the images I need. Can someone contact him or me about access and/or permission to use the images?

Thanks,  
Jon

---

**From:** Montz, Matthew Thomas  
**Sent:** Friday, May 09, 2008 3:07 PM  
**To:** Ponstein, Jonathan B.  
**Subject:** RE: HZI

Yes, that would be great. Not sure if it would help, but we had a bathymetry study performed in the river and can get you the dwg file. Here's a pdf of what we have. The dwg is about 54 megs...let me know if you want it.

<< File: Plant Vogtle River Survey Topo-Rev1.pdf >>  
Thanks

**Matthew T. Montz**  
Office 205-992-5629

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**From:** Ponstein, Jonathan B.  
**Sent:** Friday, May 09, 2008 2:56 PM  
**To:** Montz, Matthew Thomas  
**Subject:** RE: HZI

Yes. It appears that the field collection was successful. It will be a couple weeks before I can process the data and give you a report. By the way, are you expecting a map with the write-up of the procedures and results? I just want to be sure what I am putting together is what you are expecting.

Jon

---

**From:** Montz, Matthew Thomas  
**Sent:** Friday, May 09, 2008 2:53 PM  
**To:** Ponstein, Jonathan B.  
**Subject:** HZI

John,  
Were your guys able to make it to Vogtle this week to perform the HZI determination?

**Matthew T. Montz**  
Environmental Specialist  
Southern Nuclear Operating Company  
Office 205-992-5629

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**From:** Parker, William K.  
**Sent:** Thursday, May 08, 2008 1:59 PM  
**To:** Montz, Matthew Thomas; Waldrup, C. Steve; Prewitt, Steve E.  
**Subject:** FW: Procedure changes

How do we write a CR for fish in the basket and not write a CR every day on the same fish when the basket is only cleaned about every 6 months.

---

**From:** Prewitt, Steve E.  
**Sent:** Thursday, May 08, 2008 9:50 AM  
**To:** Parker, William K.  
**Subject:** FW: Procedure changes

Can you get this added and notify Steve W?  
Prewitt

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**From:** Waldrup, C. Steve  
**Sent:** Wednesday, May 07, 2008 8:28 PM  
**To:** Prewitt, Steve E.  
**Subject:** FW: Procedure changes

Steve,  
We need to add a note to 11882-2 to write a CR if fish are observed in the traveling water screen trash basket at the river. This is part of the U3 & 4 justification. Please send me a note when it is complete.

Thanks,  
*Steve Waldrup*

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**From:** Montz, Matthew Thomas  
**Sent:** Wednesday, May 07, 2008 2:27 PM  
**To:** Waldrup, C. Steve  
**Subject:** Procedure changes

Steve,  
Back at the beginning of the year, before we started the impingement and entrainment study you and I discussed a modification to the Outside Area Rounds Procedure (11882-2) to include observing the trash basket for fish kills and threatened and endangered species. Do you know if those changes were ever made? If not, what do I need to do to get those revisions added to the procedure?

Again, thank you, Kevin and D'Andre for all your help so far with this project. Hopefully you all have survived the outage and things are returning to normal.

**Matthew T. Montz**  
Environmental Specialist  
Southern Nuclear Operating Company  
Office 205-992-5629

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printout of this e-mail and any attachments. Thank you.

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**From:** Montz, Matthew Thomas  
**Sent:** Thursday, April 03, 2008 6:49 AM  
**To:** 'Downing, John'  
**Subject:** RE: Fish Entrainment Sampling Techniques

Most of our large files have been going through the Shaw eroom.

**Matthew T. Montz**  
Office 205-992-5629

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**From:** Downing, John [mailto:john.downing@shawgrp.com]  
**Sent:** Wednesday, April 02, 2008 3:20 PM  
**To:** Montz, Matthew Thomas  
**Subject:** RE: Fish Entrainment Sampling Techniques

I still have a 7 MB file to send to you. I have successfully send you 3 of the 4 file (I think) but this 7 MB file just does not get through your email server.

Do you have an FTP site or a portal or server where I can post this file for you?

**John Downing**  
Senior Scientist  
Shaw Environmental & Infrastructure Group  
11 Northeastern Boulevard  
Salem, NH 03079  
603.870.4589 direct  
603.870.4580 fax

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[www.shawgrp.com](http://www.shawgrp.com)

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**From:** Downing, John  
**Sent:** Wednesday, April 02, 2008 3:17 PM  
**To:** 'mtmontz@southernco.com'  
**Subject:** FW: Fish Entrainment Sampling Techniques

I am trying to send this again to you again. This was returned to me as undeliverable when I sent it earlier.

I will send the two attachments separately as one is 7 MB and the other is 2 MB. Here is the 2 MB file.

Most email servers will accept up to 10 MB, but sending these separately may get these through to you.

**John Downing**  
Senior Scientist  
Shaw Environmental & Infrastructure  
11 Northeastern Boulevard  
Salem, NH 03079-1953  
(603) 870-4589 Direct  
(603) 870-4501 Fax

6/2/2008

**From:** Downing, John  
**Sent:** Wednesday, April 02, 2008 2:59 PM  
**To:** London, Eileen; 'mtmontz@southernco.com'  
**Subject:** Fish Entrainment Sampling Techniques

Matt, I was good to speak with you today. As we discussed I have attached a couple of documents that should be able to give you a couple examples of how entrainment samples are typically taken for use in estimating entrainment. I hope these are of some help.

The first document (Mystic Final E&I Report) is an example where we tapped into the discharge pump at Mystic Station to collect the entrainment samples. As you will see in that report (PDF pages 16 and 17) we collected ichthyoplankton abundance samples just downstream of the circulating water pump as well as in the river in front of the plant using a typical oblique tow pattern of the plankton net from a small boat in front of the intake structure.

The second document (june21ProposedScopeofWork.doc) is the scope of work submitted to the agency for review of our sampling method where we pumped samples from behind the circ water pump. On figures 5 and 6 of that document you can see a couple of schematics of where and how the tap was made and how we positioned the energy dissipation tank to limit the water pressure.

Finally, I will need to attach two other documents to a separate email as this document will be too large to send.

Those two documents (NRG Oswego PIC and Oswego Photos) describes on PDF page 61, the sampling using three 2-inch PVC pipes set at the  $\frac{1}{4}$  at the  $\frac{1}{2}$  and at the  $\frac{3}{4}$  depth in the intake channel to collect the entrainment sample. These 2-inch sampling pipes are attached to a 4 inch PVC pipe which is in turn connected to a 4-inch trash pump. The trash pump discharges to a large volume energy dissipation tank and through a plankton net. Either the discharge pipe to the energy dissipation tank or the discharge of the flow from the dissipation tank will have a flow meter to monitor the flow through the sampling net.

Photos of the Oswego sampling pipe and the scope of the entrainment sampling using the three depth of withdrawal pipes will be sent in the subsequent email. This email already has 9 MB of attachments.

**John Downing**  
Senior Scientist  
Shaw Environmental & Infrastructure  
11 Northeastern Boulevard  
Salem, NH 03079-1953  
(603) 870-4589 Direct  
(603) 870-4501 Fax  
(617) 281-7262 Cell  
[www.shawgrp.com](http://www.shawgrp.com)

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**From:** London, Eileen  
**Sent:** Monday, March 31, 2008 7:50 AM  
**To:** mtmontz@southernco.com  
**Cc:** Downing, John  
**Subject:** Fish Impingement

Hi Matt – I spoke with John Downing about your fish impingement dilemma and he is happy to talk with you about potential solutions. He has had similar sampling problems in the past and came up with some innovative solutions. He will give you a call to discuss.

Nice to meet you last week. For the meeting with EPD to "delineate" waters of the state, is there anything you would like us to prepare prior to that meeting for your review? Please let me know. Thanks.

Eileen London  
978-524-4883

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**From:** Moorer, Tom C.  
**Sent:** Friday, March 21, 2008 11:44 AM  
**To:** Montz, Matthew Thomas  
**Subject:** RE: I&E Sampling

Please ask these guys what the flowrate of the screen wash system is? That was a question posed by Mike Masnik Wednesday.

Thanks,

TCM

**Thomas C. Moorer**  
**Southern Nuclear Development**  
**Project Manager - Environmental**  
**(205) 992-5807 (office)**  
**(205) 585-1344 (cell)**  
**(205) 438-1886 (LINC)**  
**(205) 992-6108 (FAX)**

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**From:** Montz, Matthew Thomas  
**Sent:** Friday, March 21, 2008 10:22 AM  
**To:** Walden, Kevin C.; Manigo, D'Andre  
**Cc:** Waldrup, C. Steve; Tamplin, Doug E.; Moorer, Tom C.; Dodd, Anthony Ray; Blanton, Stan (Balch)  
**Subject:** I&E Sampling

Tony Dodd and Bob Brinkman with GPC Environmental Services will be at Plant Vogtle Tuesday, March 25 thru Thursday, March 27 to conduct impingement and entrainment sampling at the River Water Make-up structure and Savannah River. **Operations support is requested to initiate manual operation of traveling screens at approximately 0800 hrs Wed., 2000 hrs Wed. and again at 0800 hrs Thurs.** Please include these activities on the POD. No additional Plant support is anticipated.

Once onsite, Tony will notify the Shift Supervisor and Security of the start and end of sampling activities.

Thank you for your help and please let me know if you have any questions.

**Matthew T. Montz**  
Environmental Specialist  
Southern Nuclear Operating Company  
Office 205-992-5629

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**From:** Moore, Phil [Phil.Moore@tetrattech.com]  
**Sent:** Wednesday, May 21, 2008 9:08 AM  
**To:** Montz, Matthew Thomas  
**Subject:** RE: Savannah R larval fish surveys

Thanks, Matt.

**From:** Montz, Matthew Thomas [mailto:MTMONTZ@SOUTHERNCO.COM]  
**Sent:** Wednesday, May 21, 2008 9:58 AM  
**To:** Moore, Phil  
**Cc:** Patterson, Karen  
**Subject:** RE: Savannah R larval fish surveys

Yes, actually, ichthyoplankton samples are being collected every 6 hours (in duplicate) and composited into a 12 hour samples. The 6 hour duplicates are held for possible future analyses.

**Matthew T. Montz**  
Office 205-992-5629

**From:** Moore, Phil [mailto:Phil.Moore@tetrattech.com]  
**Sent:** Wednesday, May 21, 2008 8:43 AM  
**To:** Montz, Matthew Thomas  
**Cc:** Patterson, Karen  
**Subject:** RE: Savannah R larval fish surveys

Matt,

I neglected to ask when we spoke on the phone....you're doing day-night ichthyoplankton sampling, I presume?

Thanks for your help,

PHIL M

**From:** Montz, Matthew Thomas [mailto:MTMONTZ@SOUTHERNCO.COM]  
**Sent:** Wednesday, May 21, 2008 9:23 AM  
**To:** Patterson, Karen; Fulton, Dale Lane  
**Cc:** Moore, Phil; Moorner, Tom C.  
**Subject:** RE: Savannah R larval fish surveys

Karen,  
I called him this morning.

**Matthew T. Montz**  
Office 205-992-5629

6/2/2008

**From:** Patterson, Karen [mailto:Karen.Patterson@tetrattech.com]  
**Sent:** Wednesday, May 21, 2008 8:06 AM  
**To:** Fulton, Dale Lane; Montz, Matthew Thomas  
**Cc:** Moore, Phil; Moorner, Tom C.  
**Subject:** FW: Savannah R larval fish surveys

Matt or Dale – Can one of you call Phil (803 641 6311) and brief him on the SR sampling – or, if you have a methodology you can send him? SCE&G is planning to do sampling in the Broad and wants to be as consistent with ya'll as possible.

Thanks. KP

---

**From:** Moore, Phil  
**Sent:** Wednesday, May 21, 2008 6:11 AM  
**To:** Patterson, Karen  
**Subject:** Savannah R larval fish surveys

Karen,

Could you pls find out exactly what Southern/Ga Power is doing in the way of ichthyoplankton surveys at Plant Vogtle?

Or direct me to someone who would know?

I'm interested in frequency of **sampling and no/location of sampling transects**. SCE&G wants to do "what everybody else is doing."

Thanks,

PHIL

---

**From:** Montz, Matthew Thomas  
**Sent:** Thursday, April 24, 2008 10:12 AM  
**To:** Walden, Kevin C.  
**Subject:** RE: Impingement and Entrainment Monitoring

**Attachments:** Trip Report 3.doc

No problem Kevin, here is the most recent trip report describing sampling activities to date. A new trip report is generated after each sampling trip. I will forward them to you when received.



Trip Report 3.doc  
(52 KB)

**Matthew T. Montz**  
Office 205-992-5629

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**From:** Walden, Kevin C.  
**Sent:** Tuesday, April 22, 2008 7:54 AM  
**To:** Montz, Matthew Thomas  
**Subject:** Impingement and Entrainment Monitoring

Matt,  
I was wondering if it'd be possible for you to send me a summary of each sampling session from down at the River Intake Structure? I would just like to keep tabs on what you guys are catching down there.

Thanks,

*Kevin Walden*

Operations Department  
Southern Company  
Plant Vogtle  
(706) 826-4290 (Office)  
(706) 826-3025 899 (Pager)  
KCWalden@southernco.com



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**To:**

**Plant Vogtle Impingement/Entrainment Assessment team members**

This message conveys summary information from the third of 24 planned sampling events for aquatic impingement and entrainment assessment at the Plant Vogtle make-up water intake structure. The sampling event was conducted during 8-10 April 2008. The event was conducted by Tony Dodd and Tom Broadwell of GPC's Environmental Field Services Group, Smyrna, GA.

### **Operation**

Three of the four vertical traveling screens were in service and two circular pumps were operating during the sampling event. Unit 1 was out of operation during this sampling event still due to scheduled maintenance outage.

### **Impingement Sampling**

Impingement sampling was conducted at the Plant Vogtle intake structure screen wash water pit during a 24-hr period from 9 into 10 April. Prior to setting the sample net for daytime sample collection, the traveling screens were rotated and cleaned of impinged debris in manual mode. The first sample (daytime) constituting a 12 HRS 5 mins impingement sample was collected at 2055 HRS on 9 April. The night sample which lasted 13 HRS 5 mins was collected at 1000 HRS on 10 April 2008.

The daytime sample yielded three fish species (chain pickerel – *Esox americanus*, dollar sunfish – *Lepomis marginatus*, and bluegill – *L. macrochirus*) and one shrimp species (shore shrimp – *Palaemonetes* sp. likely *vulgaris* – still to be confirmed). The nighttime sample yielded five fish including two bluegill, one warmouth (*L. gulosus*), black crappie (*Pomoxis nigromaculatus*), and one hogchoker (*Trinectes maculatus*). The hogchoker was alive upon collection from the trash pit. All other specimens were in good to relatively good condition following apparent recent morbidity. The black crappie was of mature adult size, but was missing at least 25 percent of its body mass in the caudal to post dorsal region due to prior predation or possibly impingement in the traveling screen mechanism. Organic and other debris associated with each sample consisting of leaves, twigs, seeds or chaff from various trees or shrubs, and several aquatic insects was observed in low volume (approximately a couple of hands full of material).

### **Entrainment Sampling**

Entrainment sampling was conducted during 8-9 April 2008. The two prior entrainment sampling attempts were unsuccessful due to a combination of factors including but not limited to sluggish velocities in the canal during the first event and to gear type and sample location logistics during the second event. The most recent canal/entrainment sampling event was considered successful owing to gear type change (using submersible pumps) mounted at the top of the canal, left bank facing the intake, at a point located about 85 ft in front of the trash racks. Beginning on the afternoon of 4/8/2008, each of two 73 gpm submersible pumps (Tsurumi Model LB3-750) and associated hoses were suspended from two tie-off points along the handrail system at the top of the canal. The pumps were powered by a 6,000 watt, gas-powered generator set on the ground

near the railing. Each pump was lowered five feet below the water surface in the canal. Pump discharge hoses were draped up and over the top edge of the canal wall with discharge ends affixed over two 500 micron sized mesh, Nitex plankton nets that were each mounted in the mouths of plastic 55 gallon drums. Once sieved through the nets, canal water (entrainment sample) was drained from the drums via a 2-inch diameter opening in each drum mid-section, through PVC pipe fittings at the drum opening, then into 4-inch diameter solid corrugated drain hoses that ultimately drained into the rip-rapped storm water basin adjacent (south side) of the intake canal. At six hour intervals, the contents of each net were retrieved and preserved in 5% formalin. Six-hour samples from one drum have been retained at the GPC lab as archive samples and samples collected from the other drum were composited in the field by 12-HR day and 12-HR night periods and will be submitted to the selected contract laboratory for enumeration and taxonomic processing.

### **Source-Water Ichthyoplankton Community Sampling**

The source water ichthyoplankton community was successfully conducted sampled at three previously established sampling stations positioned along a cross-sectional transect of the Savannah River located approximately 250 feet upstream of the mouth of the intake canal during 9-10 April 2008. Samples were collected at approximately 6-hour intervals, two samples each during day- and night-time periods to represent a 24-hr period. The field crew has routinely observed heavy detritus loads and net clogging at depths below three meters on each sampling event thus far. Because net clogging overloads the nets with detritus and greatly reduces the filtering efficiency of the nets, based on professional judgment, a decision was made in the field during this sampling event to limit the depth of ichthyoplankton sampling nets to 3 meters and increase the sampling time at each 1-meter depth interval to reduce net clogging, detritus loads and provide adequate sampling volume. All riverine samples have been preserved and the composited 12-HR day and night samples are being temporarily held at GPC's Smyrna Lab for future laboratory processing for enumeration and species identification by the selected contract laboratory.

### **Other Observations**

Surface water temperature during the 24-hr event was approximately 17° C compared to 12° C during the first sampling event in early March. Flow in the Savannah River ranged from approximately 7,130 cfs down to 6,090 cfs during this event (USGS Waynesboro Gage No. 021973269).

Our primary observations following this sampling event include:

- To date, the impingement collection has recorded 21 individual specimens representing 12 species among eight taxonomic families of aquatic organisms (52 percent are members of the Centrarchidae) including:

Centrarchidae – sunfishes  
Esocidae – pikes  
Percidae – perches and darters  
Clupeidae – herrings  
Ictaluridae – catfishes  
Cyprinidae – minnows  
Soleidae – soles  
Palaemonidae – shore shrimps

- Specimens collected in this study are potentially impinged between a few hours to 12 hours before the screens are either randomly, automatically rotated every eight hours or manually

rotated at the end of each diel cycle. Further, specimens are exposed to dry conditions in the trash pit between collections. In light of these observations, most specimens observed during this sampling event and prior events appeared to be in reasonably good body condition (i.e., without advanced necrosis, appearance of relatively clear eyes, scales attached, and gill filaments in relatively good condition) thus indicating possibly most specimens were alive or only recently deceased when first being washed into the trash pit collection net.

- canal entrainment sampling via pumping from the top of the canal via submersible pumps appears to be a viable method for this study. In the near future, a comparison/calibration exercise will be conducted in the river to compare net collected vs pump collected samples in terms of efficiency and examination of potential organism damage due to the pumping apparatus.
- one of the submersible pumps did not function as well as expected in terms of flow rate. That problem has been corrected with the introduction of a new replacement pump before the next sampling event begins.
- numerous aquatic insects, mostly larval forms, have been observed in the pumped entrainment samples and riverine samples. Very few fish larvae and no eggs have actually been observed to date by field staff when examining freshly collected and preserved samples in the field.
- a few adult fish have been observed swimming or jumping at the water's surface in mid- to outer half of the canal during day and night sampling periods.
- although Unit 2 intake operators were very short-handed during this past event owing to the ongoing maintenance outage, their efforts to meet our impingement sampling schedule need as well as possible was greatly appreciated. If possible, our recommendation is that impingement samples (12-hour screen wash samples) be collected at 0800 and 2200 HRS during each 24-HR event.
- The next sampling event is scheduled for 12-24 April 2008.

Please contact me if you have any questions.

Tony Dodd, CFP  
Environmental Specialist  
GPC Environmental Field Services  
404-799-2142 (Main)  
770-550-2702 (INC Cell)  
8-530-2142 (Internal Direct)  
ardodd@southco.com

---

**From:** Montz, Matthew Thomas  
**Sent:** Tuesday, May 06, 2008 10:46 AM  
**To:** Manigo, D'Andre  
**Subject:** FW: Trip Report 4.doc

**Attachments:** Trip Report 4.doc; 2nd April Event.pdf

I&E Study Trip Report 4

**Matthew T. Montz**  
Office 205-992-5629

---

**From:** Dodd, Anthony Ray  
**Sent:** Wednesday, April 30, 2008 2:30 PM  
**To:** Montz, Matthew Thomas; 'Coutant, Chuck/Nancy'  
**Cc:** Blanton, Stan (Balch); Nichols, Michael C. (Env. Lab GPC); Walden, Kevin C.  
**Subject:** Trip Report 4.doc

Vogtle Impingement/Entrainment Study Team,

Please find electronic copies of the current Vogtle I& E sampling trip report and associated field data sheets.  
Please contact me if you have any questions.



Trip Report 4.doc (47 KB)



2nd April Event.pdf (375 KB)

*This electronic mail message may contain privileged and confidential information which is intended solely for the indicated recipient. If you have received this message in error, please delete the message without reading it and notify the sender.*

**To:**

**Plant Vogtle Impingement/Entrainment Assessment team members**

This message conveys summary information from the fourth of 24 planned sampling events for aquatic impingement and entrainment assessment at the Plant Vogtle make-up water intake structure. This sampling event was conducted during 22-24 April 2008. The event was conducted by Tony Dodd and Joey Slaughter of GPC's Environmental Field Services Group, Smyrna, GA.

#### **Operation**

Three of the four vertical traveling screens were in service and two circulator pumps were operating during the sampling event. It's our understanding that the maintenance outage on Unit 1 was nearly finished at that time.

#### **Impingement Sampling**

Impingement sampling was conducted at the Plant Vogtle intake structure screen wash outfall/pit during the 24-hr period beginning near 0900 on 23 April to 0900 on 24 April 2008. Prior to setting the sample net for daytime sample collection, three of the four operative traveling screens were rotated and purged of impinged debris in manual mode. No fish or other aquatic organisms were observed in either the day or night sample. About five double handfuls of leaves and debris were present in the night sample and much less in the day sample.

#### **Entrainment Sampling**

Entrainment sampling was conducted during 23-24 April 2008. Using the submersible pump system described in the previous report, at six hour intervals, the contents of each entrainment sampling net were retrieved and preserved in 5% formalin. Six-hour samples from one drum have been retained at the GPC lab as archive samples and samples collected from the other drum were composited in the field by 12-HR day and 12-HR night periods. The average volume of pumped canal water per sample was approximately 73.8 m<sup>3</sup> on this trip. Samples will be submitted to the laboratory for enumeration and taxonomic processing. The contract laboratory has been selected (Normandeau Associates, Inc.)

#### **Source-Water Ichthyoplankton Community Sampling**

The source water ichthyoplankton community was 22-23 April 2008. Samples were collected at approximately 6-hour intervals, two samples each during day- and night-time periods to represent a 24-hr period. During prior sampling events, the field crew has routinely observed heavy detritus loads and net clogging at depths below three 3 meters and had opted to sample depths at 3 m or less depending on river stage in order to reduce net clogging. River discharge and stage has exhibited a general pattern of decline during sampling events since the initial sampling event in early March. Each of the three sampling stations was sampled at 1-m intervals to a maximum depth of 2 meters for a total of 9 minutes of sampling time at each depth. The mean volume of river water sampled at each was approximately 108.3 m<sup>3</sup>. All source water samples have been preserved and the composited 12-HR day and night samples are being temporarily held at GPC's Smyrna Lab for future laboratory processing for enumeration and species identification by the contract laboratory.

### Other Observations

- Surface water temperature during the 24-hr event was approximately 18.4° C compared to 17° C two weeks prior. Flow in the Savannah River ranged between 3,910 and 4,110 cfs during this event (USGS Waynesboro Gage No. 021973269) as compared to approximately 6,500 cfs two weeks prior.
- A single live, juvenile Eastern spiny softshell turtle (*Apalone spinifera spinifera*) was caught in the day and night impingement samples and released back to the river in each case.
- We understand that the Unit 3 traveling screen might be under re-assembly and returning to service during the next scheduled sampling event during 6-8 May 2008.
- To date, 21 individual organisms including one shrimp representing 12 species and 8 taxonomic families have been represented in the impingement sampling component of this study.

The next sampling event is scheduled for 6-8 May 2008.

Please contact me if you have any questions.

Tony Dodd, CFP  
Environmental Specialist  
GPC Environmental Field Services  
404-799-2142 (Main)  
770-550-2502 (LINC Cell)  
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ardodd@southernco.com

# Vogle I & E Study - Sample Chain Of Custody

Collected by: ARD / JES

Sample No.	Integrated Sample ID and Collection Date	Approximate Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
		~0000 HRS	5% formalin or 10% formalin Wet Ice	✓	✓
1	ENLD1A 042308	1430	5%		
2	ENLD2A 042308	2030			
3	ENLDCOMP 042308	2030			
4	ENLN1A 042308	0233			
5	ENLN2A - 04/24/08	0830			
6	ENLNCOMP 042408	0830	↓		
7	IMDA - NO FISH	0930	NO SAMPLE TO Preserve No Fish		
8	IMNA - NO FISH	0900	NO SAMPLE TO Preserve No Fish		
9	SWLD1A 042208	1034	5%		
10	SWLD2A 042208	1607			
11	SWLDCOMP 042208	1607			
12	SWMD1A 042208	1003			
13	SWMD2A 042208	1539			
14	SWMDCOMP 042208	1539			
15	SWRD1A 042208	0929			
16	SWRD2A 042208	1511			
17	SWRDCOMP 042208	1511			
18	SWLN1A 042208	2147			
19	SWLN2A 042308	0401			
20	SWLNCOMP 042308	0401			
21	SWMN1A 042208	2120			
22	SWMN2A 042308	0331			
23	SWMNCOMP 042308	0331			
24	SWRN1A 042208	2653			
25	SWRN2A 042308	0302			
26	SWRNCOMP 042308	0302	↓		
27					
28					
29					
30					

EN = entrainment sample      D1 = first day sample      C = composited 1st and 2nd day or night samples  
 IM = impingement sample      N2 = second night sample  
 SW = source water sample      A = archived 6-hour sample

Relinquished by: [Signature] Date: 4/24/08 Time: 1800

Received by: JES Date: 4/24/08 Time: 1800

# PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM

## Sample Information

Page: 1 of 1

Collector(s): JES, ARB

12-hour Period (circle) 4/22/08 TO

Remarks: \_\_\_\_\_

Start Date 4/22/2008  
End Date \_\_\_\_\_

	DAY	NIGHT
Time	<u>0856</u>	<u>2020</u>
Time	<u>2020</u>	<u>0800</u>

Elapsed Time \_\_\_\_\_

## Plant and CWIS Operating Conditions

	No. Pumps	Pump Flow (gpm)	No. of VTS Operating
Start	<u>2</u>		
Finish	<u>2</u>		<u>3 of 4</u>

	River Stage (ft.)	
Start	<u>6.48</u>	<u>3,890 cfs</u>
Finish	<u>6.68</u>	<u>4,110 cfs</u>

## Physicochemical parameters:

D.O.	<u>9.03</u>	mg/L
pH	<u>7.08</u>	SU
Cond.	<u>113.4</u>	uS/cm
Turbidity	<u>0.0</u>	NTU

	Water Temperature (°C)
Start	<u>18.4</u>
Finish	

Location of Measurement:

Hargrave's ramp

## Field Conditions/Other Observations

- HydroLab S/N 071000045840
- Clear Sunny weather,
- Winds N/NW - 0-8 Knots
- Air Temp 15.3°C
- Depth from top rail to canal 20.3'

Event #

Entered by:  
Date: / /



### Sample Information

YES AND (TD)

Page: 1 of 1

**DAY**

**NIGHT**

**12-hour Period (circle)**

**Start Date**

4/23/08

## Time

9580

**End Date**

4/23/08

Time

2620

**Elapsed Time**

No Fish

- \* partly cloudy
- \* nearly full - waxing moon
- \* winds light, variable ~ 2 Kt

Event #

Entered by:

Date: / /

### Sample Information

TD / TES

DAY

## NIGHT

Page: 1 of 1

**12-hour Period (circle)**

**Start Date**

4/23/08  
4/24/08

Time

**2020**

## Time

0900

**Elapsed Time**

2. min. rotation

[illegible]

~5 dbl. handful of leaves, twigs, seeds.

Event #

**Entered by:**

Date: / /

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: TES / ARD

Date: 4/22/08

River/Water Conditions:

Circle One : Source Water Sampling or Entrainment Sampling

<u>DAY 1</u>	DAY 2	NIGHT 1	NIGHT 2	WP 33° 9.093' 81° 45.297'	Depth (m)	Time at Depth (mins)
Location: Circle one   Left Bank   Mid-Channel <u>Right Bank</u> (facing upstream)						
Nets or Pump						
Time start (HRS)				0911	1	6
Current meter start count				421622	2	6
Current meter stop count				<del>442998</del> 442998	3	6
Time stop (HRS)				0929	4	X
Total time for retrieval (mins)				19	5	X
Calculated sample flow volume (m³/s)				112.7	6	X

Location: Circle one	Left Bank	Mid-Channel	Right Bank	WP 33° 9.086' 81° 45.308'	Depth (m)	Time at Depth (mins)
facing upstream						
Nets or Pump						
Time start (HRS)				0944	1	6
Current meter start count				442600	2	6
Current meter stop count				466845	3	6
Time stop (HRS)				1003	4	X
Total time for retrieval (mins)				19	5	X
Calculated sample flow volume (m³/s)				<del>1003</del> 126.8	6	X

Location: Circle one	Left Bank	Mid-Channel	Right Bank	WP 33° 9.083' 81° 45.316'	Depth (m)	Time at Depth (mins)
facing upstream						
Nets or Pump						
Time start (HRS)				1015	1	6
Current meter start count				466654	2	6
Current meter stop count				479449	3	6
Time stop (HRS)				1034	4	X
Total time for retrieval (mins)				19	5	X
Calculated sample flow volume (m³/s)				<del>1034</del> 67.5	6	X

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

- Sunny / light winds C-5 N/NE

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: JFS, TD

Date: 4/22/08

River/Water Conditions: \_\_\_\_\_

Circle One: Source Water Sampling or Entrainment Sampling

DAY 1	<u>DAY 2</u>	NIGHT 1	NIGHT 2															
Location: Circle one				Left Bank	Mid-Channel	<u>Right Bank</u> (facing upstream)												
Nets or Pump																		
Time start (HRS)				<u>1452</u>		<table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>1</td><td><u>6</u> <u>9</u></td></tr> <tr><td>2</td><td><u>6</u> <u>9</u></td></tr> <tr><td>3</td><td><u>6</u> <u>9</u></td></tr> <tr><td>4</td><td><u>6</u> <u>9</u></td></tr> <tr><td>5</td><td><u>6</u> <u>9</u></td></tr> <tr><td>6</td><td><u>6</u> <u>9</u></td></tr> </table>	1	<u>6</u> <u>9</u>	2	<u>6</u> <u>9</u>	3	<u>6</u> <u>9</u>	4	<u>6</u> <u>9</u>	5	<u>6</u> <u>9</u>	6	<u>6</u> <u>9</u>
1	<u>6</u> <u>9</u>																	
2	<u>6</u> <u>9</u>																	
3	<u>6</u> <u>9</u>																	
4	<u>6</u> <u>9</u>																	
5	<u>6</u> <u>9</u>																	
6	<u>6</u> <u>9</u>																	
Current meter start count				<u>479452</u>		shallow?												
Current meter stop count				<u>476849</u>														
Time stop (HRS)				<u>1511</u>														
Total time for retrieval (mins)				<u>19</u>														
Calculated sample flow volume (m <sup>3</sup> /s)				<u>91.7</u>														

Location: Circle one	Left Bank	<u>Mid-Channel</u>	Right Bank	facing upstream													
Nets or Pump																	
Time start (HRS)			<u>1520</u>		<table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>1</td><td><u>6</u> <u>9</u></td></tr> <tr><td>2</td><td><u>6</u> <u>9</u></td></tr> <tr><td>3</td><td><u>6</u> <u>9</u></td></tr> <tr><td>4</td><td><u>6</u> <u>9</u></td></tr> <tr><td>5</td><td><u>6</u> <u>9</u></td></tr> <tr><td>6</td><td><u>6</u> <u>9</u></td></tr> </table>	1	<u>6</u> <u>9</u>	2	<u>6</u> <u>9</u>	3	<u>6</u> <u>9</u>	4	<u>6</u> <u>9</u>	5	<u>6</u> <u>9</u>	6	<u>6</u> <u>9</u>
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4	<u>6</u> <u>9</u>																
5	<u>6</u> <u>9</u>																
6	<u>6</u> <u>9</u>																
Current meter start count			<u>496849</u>		shallow/ low flow												
Current meter stop count			<u>520424</u>														
Time stop (HRS)			<u>1539</u>														
Total time for retrieval (mins)			<u>19</u>														
Calculated sample flow volume (m <sup>3</sup> /s)			<u>124.3</u>														

Location: Circle one	<u>Left Bank</u>	Mid-Channel	Right Bank	facing upstream													
Nets or Pump																	
Time start (HRS)			<u>1548</u>		<table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>1</td><td><u>9</u></td></tr> <tr><td>2</td><td><u>9</u></td></tr> <tr><td>3</td><td><u>9</u></td></tr> <tr><td>4</td><td><u>9</u></td></tr> <tr><td>5</td><td><u>9</u></td></tr> <tr><td>6</td><td><u>9</u></td></tr> </table>	1	<u>9</u>	2	<u>9</u>	3	<u>9</u>	4	<u>9</u>	5	<u>9</u>	6	<u>9</u>
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2	<u>9</u>																
3	<u>9</u>																
4	<u>9</u>																
5	<u>9</u>																
6	<u>9</u>																
Current meter start count			<u>520425</u>														
Current meter stop count			<u>536023</u>														
Time stop (HRS)			<u>1607</u>														
Total time for retrieval (mins)			<u>19</u>														
Calculated sample flow volume (m <sup>3</sup> /s)			<u>82.3</u>														

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

- mostly cloudy; moderate wind

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: DES / TD

Date: 4/22/08

River/Water Conditions:

Circle One: Source Water Sampling or Entrainment Sampling

DAY 1	DAY 2	<u>NIGHT 1</u>	NIGHT 2		Depth (m)	Time at Depth (mins)
Location: Circle one				Left Bank	Mid-Channel	<u>Right Bank</u> (facing upstream)
Nets or Pump						
Time start (HRS)				<u>2024</u>	<u>1</u>	<u>9</u>
Current meter start count				<u>586025</u>	<u>2</u>	<u>9</u>
Current meter stop count				<u>586866</u>	<u>3</u>	X
Time stop (HRS)				<u>2053</u>	<u>4</u>	
Total time for retrieval (mins)				<u>19</u>	<u>5</u>	
Calculated sample flow volume (m <sup>3</sup> /s)				<u>109.9</u>	<u>6</u>	

Location: Circle one	Left Bank	<u>Mid-Channel</u>	Right Bank	facing upstream		
Nets or Pump						
Time start (HRS)			<u>2101</u>	<u>1</u>	<u>9</u>	
Current meter start count			<u>586812</u>	<u>2</u>	<u>9</u>	
Current meter stop count			<u>586810</u>	<u>3</u>	X	
Time stop (HRS)			<u>2120</u>	<u>4</u>		
Total time for retrieval (mins)			<u>19</u>	<u>5</u>		
Calculated sample flow volume (m <sup>3</sup> /s)			<u>105.2</u>	<u>6</u>		

Location: Circle one	<u>Left Bank</u>	Mid-Channel	Right Bank	facing upstream		
Nets or Pump						
Time start (HRS)			<u>2120</u>	<u>1</u>	<u>9</u>	
Current meter start count			<u>586813</u>	<u>2</u>	<u>9</u>	
Current meter stop count			<u>601913</u>	<u>3</u>	X	
Time stop (HRS)			<u>2147</u>	<u>4</u>		
Total time for retrieval (mins)			<u>19</u>	<u>5</u>		
Calculated sample flow volume (m <sup>3</sup> /s)			<u>132.4</u>	<u>6</u>		

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

- still / overcast

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: ARD / TES

Date: 4/25/08

River/Water Conditions:

Circle One: Source Water Sampling or Entrainment Sampling

DAY 1	DAY 2	NIGHT 1	NIGHT 2	Location: Circle one	Left Bank	Mid-Channel	Right Bank (facing upstream)	Depth (m)	Time at Depth (mins)
Nets or Pump									
Time start (HRS)								1	9
Current meter start count								2	9
Current meter stop count								3	X
Time stop (HRS)								4	
Total time for retrieval (mins)								5	
Calculated sample flow volume (m <sup>3</sup> /s)								6	

*~ 2m max depth*

Location: Circle one								Left Bank	Mid-Channel	Right Bank facing upstream
Nets or Pump										
Time start (HRS)								1	9	
Current meter start count								2	9	
Current meter stop count								3	X	
Time stop (HRS)								4		
Total time for retrieval (mins)								5		
Calculated sample flow volume (m <sup>3</sup> /s)								6		

Location: Circle one								Left Bank	Mid-Channel	Right Bank facing upstream
Nets or Pump										
Time start (HRS)								1	9	
Current meter start count								2	9	
Current meter stop count								3	X	
Time stop (HRS)								4		
Total time for retrieval (mins)								5		
Calculated sample flow volume (m <sup>3</sup> /s)								6		

## Comments/Observations:

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

*- clear / cool*

*- H<sub>2</sub>O was dropped ~ 2' since Night 1 samples*

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: TD, JES

Date: 4/23/08

River/Water Conditions: \_\_\_\_\_

Circle One: Source Water Sampling or Entrainment Sampling

DAY 1 DAY 2 NIGHT 1 NIGHT 2  
Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)  
Nets or Pump  
Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)  
Archive 1, Composite the other

Depth (m) Time at Depth (mins)

0856
1430 (Archive)
1. 322.5 m/s
18,704 g / 70.6 m <sup>3</sup>

1	
2	
3	
4	
5	
6	

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Nets or Pump

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)


1	
2	
3	
4	
5	
6	

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Nets or Pump

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)


1	
2	
3	
4	
5	
6	

Comments/Observations:

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

23.1' from top rail to canal water surface.  
4.0 deployment. 58 g/mi avg.

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: JES / 70

Date: 4/23/02

River/Water Conditions: \_\_\_\_\_

Circle One: Source Water Sampling or Entrainment Sampling

DAY 1	<u>DAY 2</u>	NIGHT 1	NIGHT 2			
Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank (facing upstream)				Depth (m)	Time at Depth (mins)	
Nets or <u>Pump</u>						
Time start (HRS)						
Current meter start count						
Current meter stop count						
Time stop (HRS)						
Total time for retrieval (mins)						
Calculated sample flow volume (m <sup>3</sup> /s)						

0237

2030

201474 s / 353 min

201474 s / 77.5 m<sup>3</sup>

6 hr Archival

1	
2	
3	
4	
5	
6	

Location: Circle one	<u>Left Bank</u>	Mid-Channel	Right Bank	facing upstream
Nets or Pump				
Time start (HRS)				
Current meter start count				
Current meter stop count				
Time stop (HRS)				
Total time for retrieval (mins)				
Calculated sample flow volume (m <sup>3</sup> /s)				

Location: Circle one	<u>Left Bank</u>	Mid-Channel	Right Bank	facing upstream
Nets or Pump				
Time start (HRS)				
Current meter start count				
Current meter stop count				
Time stop (HRS)				
Total time for retrieval (mins)				
Calculated sample flow volume (m <sup>3</sup> /s)				

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

Day 1 & 2 composite - 1-liter jar



# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: JES (M)

Date: 4/23/02

River/Water Conditions: \_\_\_\_\_

Circle One :      Source Water Sampling      or      Entrainment Sampling

DAY 1	DAY 2	<u>NIGHT 1</u>	NIGHT 2		
Location: Circle one <u>Left Bank</u> Mid-Channel    Right Bank (facing upstream)				Depth (m)	Time at Depth (mins)
Nets or Pump <u>2</u>					
Time start (HRS)				0239	1
Current meter start count				2039 HR	2
Current meter stop count					3
Time stop (HRS)				0233	4
Total time for retrieval (mins)				356	5
Calculated sample flow volume (m <sup>3</sup> /s)				20648 g / 70.2 m <sup>3</sup>	6

*Archive*

Location: Circle one	Left Bank	Mid-Channel	Right Bank facing upstream		
Nets or Pump					
Time start (HRS)					1
Current meter start count					2
Current meter stop count					3
Time stop (HRS)					4
Total time for retrieval (mins)					5
Calculated sample flow volume (m <sup>3</sup> /s)					6

Location: Circle one	Left Bank	Mid-Channel	Right Bank facing upstream		
Nets or Pump					
Time start (HRS)					1
Current meter start count					2
Current meter stop count					3
Time stop (HRS)					4
Total time for retrieval (mins)					5
Calculated sample flow volume (m <sup>3</sup> /s)					6

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

23.3' handrail to canal surface

# Vogle I & E Study - Source Water Community / Entrainment Sampling\*

Collected by: RES, TD

Date: 4/24/08

River/Water Conditions: \_\_\_\_\_

Circle One : Source Water Sampling or Entrainment Sampling

DAY 1	DAY 2	NIGHT 1	NIGHT 2	Depth (m)	Time at Depth (mins)
Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank (facing upstream)					
Nets or Pump _____					
Time start (HRS)				1	
Current meter start count				2	
Current meter stop count				3	
Time stop (HRS)				4	
Total time for retrieval (mins)				5	
Calculated sample flow volume (m <sup>3</sup> /s)				6	

0240  
0830  
350  
20,300 s / 76.6 m<sup>3</sup>

Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank facing upstream					
Nets or Pump _____					
Time start (HRS)				1	
Current meter start count				2	
Current meter stop count				3	
Time stop (HRS)				4	
Total time for retrieval (mins)				5	
Calculated sample flow volume (m <sup>3</sup> /s)				6	

Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank facing upstream					
Nets or Pump _____					
Time start (HRS)				1	
Current meter start count				2	
Current meter stop count				3	
Time stop (HRS)				4	
Total time for retrieval (mins)				5	
Calculated sample flow volume (m <sup>3</sup> /s)				6	

**Comments/Observations:**

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

---

**From:** Montz, Matthew Thomas  
**Sent:** Tuesday, May 13, 2008 3:44 PM  
**To:** Manigo, D'Andre  
**Subject:** FW: Trip Report 5.doc

**Attachments:** Trip Report 5.doc; 1st May event.pdf

FYI

**Matthew T. Montz**  
Office 205-992-5629

---

**From:** Dodd, Anthony Ray  
**Sent:** Tuesday, May 13, 2008 3:34 PM  
**To:** Montz, Matthew Thomas; Charles Coutant (ccoutant3@comcast.net)  
**Cc:** Blanton, Stan (Balch); Walden, Kevin C.; Candler, W. Jim; Nichols, Michael C. (Env. Lab GPC)  
**Subject:** Trip Report 5.doc

Vogle Impingement/Entrainment Study Team,

Please find electronic copies of the current Vogle I& E sampling trip report and associated field data sheets.  
Please contact me if you have any questions.



Trip Report 5.doc (39 KB)



1st May event.pdf (372 KB)

Tony Dodd, CFP  
Environmental Specialist  
Georgia Power Environmental Lab  
5131 Maner Rd.  
Smyrna Ga 30080  
Desk Ph: 404-799-2142  
Fax: 404-799-2141  
LINC Cell: 770-550-2502  
Blackberry: 404-434-9412  
Email: [ardodd@southernco.com](mailto:ardodd@southernco.com)

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**This electronic mail message may contain privileged and confidential information which is intended solely for the indicated recipient. If you have received this message in error, please delete the message without reading it and notify the sender.**

**To:**

**Plant Vogtle Impingement/Entrainment Assessment team members**

This message conveys summary information from the fifth of 24 planned sampling events for aquatic impingement and entrainment assessment at the Plant Vogtle make-up water intake structure. This sampling event was conducted during 6-8 May 2008. The event was conducted by Tony Dodd and Gary Dye of GPC's Environmental Field Services Group, Smyrna, GA.

#### **Operation**

Three of the four vertical traveling screens were in service and two circulator pumps were operating during the sampling event.

#### **Impingement Sampling**

Impingement sampling was conducted at the Plant Vogtle intake structure screen wash outfall/pit between 0800 hrs on 7 May and 0800 hrs on 8 May 2008. Prior to setting the sample net for daytime sample collection, the three operative traveling screens were rotated and purged of impinged debris. No fish or other aquatic organisms were observed in 12-hr daytime component. Two fish including juvenile life stages of bluespotted sunfish (*Enneacanthus gloriosus*) and pirate perch (*Aphredoderus sayanus*) were collected during the 12-hr night sample. These species are new to the list of observed impinged species during this study to date. About 14 double handfuls of organic debris in the form of leaves and twigs were present in the night sample and much less in the day sample.

To date, a total of 23 organisms representing 14 species in nine taxonomic families have been collected in the impingement sampling program.

#### **Entrainment Sampling**

Entrainment sampling was conducted during 7-8 May 2008. The average volume of pumped canal water per sample was approximately 86.7 m<sup>3</sup> on this trip. Samples will be submitted to the laboratory for enumeration and taxonomic processing.

#### **Source Water Ichthyoplankton Community Sampling**

The source water ichthyoplankton community was 6-7 May 2008. Each of the three sampling stations was sampled at 1-m intervals to a maximum depth of 2 meters for a total of 9 minutes of sampling time at each depth. The mean volume of river water sampled at each was approximately 130.1 m<sup>3</sup>. All source water samples have been preserved and the composited 12-HR day and night samples are being temporarily held at GPC's Smyrna Lab for future laboratory processing.

#### **Other Observations**

- Surface water temperature during the 24-hr event was approximately 22.4° C compared to 17° C a month prior. Flow in the Savannah River ranged from 4,060 down to 3,930 cfs during this event (USGS Waynesboro Gage No. 021973269).

- The next sampling event is scheduled for 20-22 May 2008.

Please contact me if you have any questions.

*Tony Dodd, CFP*  
*Environmental Specialist*  
*GPC Environmental Field Services*  
*404-799-2142 (Main)*  
*770-550-2502 (LINC Cell)*  
*8-530-2142 (Internal Direct)*  
*ardodd@southernco.com*

DRAFT DOCUMENT

PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM																										
Sample Information				Page: <u>1</u> of <u>1</u>																						
Collector(s): <u>ARD/GPD</u>																										
12-hour Period (circle) <span style="margin-left: 100px;">DAY</span> <span style="margin-left: 100px;">NIGHT</span>																										
Start Date <u>5/7/08</u>		Time <u>0800</u>		Remarks: <u>                    </u>																						
End Date <u>5/8/08</u>		Time <u>1945</u>																								
		Elapsed Time																								
Plant and CWIS Operating Conditions																										
	No. Pumps	Pump Flow (gpm)		No. of VTS Operating																						
Start	<u>2</u>			<u>3/4</u>																						
Finish	<u>2</u>																									
<div style="display: flex; justify-content: space-between;"> <table border="1" style="margin-top: 10px;"> <thead> <tr> <th colspan="2" style="text-align: left; padding: 5px;">River Stage (ft.)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Start</td> <td style="padding: 5px;"><u>6.63</u></td> </tr> <tr> <td style="padding: 5px;">Finish</td> <td style="padding: 5px;"><u>6.5</u></td> </tr> </tbody> </table> <div style="margin-top: 10px;"> <p><u>4060 cfs</u></p> <p><u>3930 cfs</u></p> </div> </div> <div style="margin-top: 10px;"> <p>5/6/08 9:00 P.M.</p> <p>Drake 2.8 P.M.</p> <p>Physicochemical parameters:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="padding: 5px;"></th> <th style="padding: 5px;"></th> <th style="padding: 5px;">mg/L</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">D.O.</td> <td style="padding: 5px;"><u>7.7</u></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">pH</td> <td style="padding: 5px;"><u>7.2</u></td> <td style="padding: 5px;">SU</td> </tr> <tr> <td style="padding: 5px;">Cond.</td> <td style="padding: 5px;"><u>121.2</u></td> <td style="padding: 5px;">uS/cm</td> </tr> <tr> <td style="padding: 5px;">Turbidity</td> <td style="padding: 5px;"><u>0.0</u></td> <td style="padding: 5px;">NTU</td> </tr> </tbody> </table> </div>						River Stage (ft.)		Start	<u>6.63</u>	Finish	<u>6.5</u>			mg/L	D.O.	<u>7.7</u>		pH	<u>7.2</u>	SU	Cond.	<u>121.2</u>	uS/cm	Turbidity	<u>0.0</u>	NTU
River Stage (ft.)																										
Start	<u>6.63</u>																									
Finish	<u>6.5</u>																									
		mg/L																								
D.O.	<u>7.7</u>																									
pH	<u>7.2</u>	SU																								
Cond.	<u>121.2</u>	uS/cm																								
Turbidity	<u>0.0</u>	NTU																								

Water Temperature (°C)

Start	<u>22.2</u>
Finish	<u>22.7</u>

Water Temp: 22.2 °C

Location of Measurement: Haugrove Ramp

Event #

Entered by:  
Date: / /



### Sample Information

ARD/GBD

Page: 1 of 1

**12-hour Period (circle)**

**DAY**

**NIGHT**

**Start Date**

5/7/08

Time

0850

**End Date**

5/7/08

## Time

1585

**Elapsed Time**

Species	TL (mm)	Weight (g)	Condition/Comment	Voucher?	Final ID
NO FISH					

Event #

Entered by:  
Date: / /



# Vogle I & E Study - Source Water Community Sampling Data Sheet\*

Collected by: CRD / ARV

Date: 5/7/08

Gear: dual 1:3 ratio 0.5 m Nitex 500 micron mesh plankton nets

Sampling Period Circle One: DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Left Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	X
Time stop	4	X
Total time for retrieval	5	X
Calculated sample flow volume (m <sup>3</sup> /s)	6	

1014 HRS
862545
887288
1035 HRS
21 MINS
130.5 (1.7 ft/s)

Location: Mid-Channel

	Depth (m)	Time at Depth (mins)
Time start (HRS)	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	X
Time stop (HRS)	4	X
Total time for retrieval (mins)	5	X
Calculated sample flow volume (m <sup>3</sup> /s)	6	

0945 HRS
835083
862542
1005 HRS
20 MINS
185.0 (2.0 ft/s)

Location: Right Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start (HRS)	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	X
Time stop (HRS)	4	X
Total time for retrieval (mins)	5	X
Calculated sample flow volume (m <sup>3</sup> /s)	6	

0917 HRS
812969
835048
0935 HRS
18 MINS
116.4 (1.6 ft/s)

## Comments/Observations:

- \* 6 hour samples are archived (type A samples)
- \* day and night sample components are composited for laboratory analysis (type C samples)

# Vogtle I & E Study - Source Water Community Sampling Data Sheet\*

Collected by: A22163D

Date: 6-7-98

Gear: dual 1:3 ratio 0.5 m Nitex 500 micron mesh plankton nets

Sampling Period Circle One: DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Left Bank (facing upstream)

Time start

Current meter start count

Current meter stop count

Time stop

Total time for retrieval

Calculated sample flow volume (m<sup>3</sup>/s)

0340 HRS
753823
812957
0358 HRS
18 MINS
100.9 (1.6 ft/s)

Depth (m)	Time at Depth (mins)
1	9 min
2 1/2	9 min
3	
4	
5	
6	

Location: Mid-Channel

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0312 HRS
767695
793816
0330 HRS
18 MINS
137.8 (2.1 ft/s)

1	9 min
2	9 min
3	
4	
5	
6	

Location: Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0244 HRS
742578
767689
0303 HRS
19 MINS
130.8 (1.9 ft/s)

1	9 min
2	9 min
3	
4	
5	
6	

Comments/Observations:

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

# Vogle I & E Study - Source Water Community Sampling Data Sheet\*

Collected by: GSA/RED

Date: 5/6/08

Gear: dual 1:3 ratio 0.5 m Nitex 500 micron mesh plankton nets

Sampling Period Circle One: DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Left Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	
Time stop	4	
Total time for retrieval	5	
Calculated sample flow volume (m <sup>3</sup> /s)	6	

2159 HRS
714963
782881
2218 HRS
19 MINS
147.2 (2.24/s)

Location: Mid-Channel

	Depth (m)	Time at Depth (mins)
Time start (HRS)	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	
Time stop (HRS)	4	
Total time for retrieval (mins)	5	
Calculated sample flow volume (m <sup>3</sup> /s)	6	

2130 HRS
687260
714975
2148 HRS
19 MINS
146.2 (2.14/s)

Location: Right Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start (HRS)	1	9 mins
Current meter start count	2	9 mins
Current meter stop count	3	
Time stop (HRS)	4	
Total time for retrieval (mins)	5	
Calculated sample flow volume (m <sup>3</sup> /s)	6	

2100 HRS
667635
687266
2119 HRS
19 MINS
103.5 (1.54/s)

## Comments/Observations:

- \* 6 hour samples are archived (type A samples)
- \* day and night sample components are composited for laboratory analysis (type C samples)

# Vogle I & E Study - Source Water Community Sampling Data Sheet\*

Collected by: FRD/050

Date: 5-7-08

Gear: dual 1:3 ratio 0.5 m Nitex 500 micron mesh plankton nets

Sampling Period Circle One: DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Left Bank (facing upstream)

Time start

Current meter start count

Current meter stop count

Time stop

Total time for retrieval

Calculated sample flow volume (m<sup>3</sup>/s)

1626 HRS
939703
963681
1645 HRS
19 MINS
126.5 (1.984/s)

Depth (m)	Time at Depth (mins)
1	9 mins
2	9 mins
3	X
4	X
5	X
6	X

Location: Mid-Channel

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1555 HRS
911192
939695
1614 HRS
79 MINS
150.3 (2.284/s)

1	9 mins
2	9 mins
3	X
4	X
5	X
6	X

Location: Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1528 HRS
887282
911190
1547 HRS
19 MINS
126.1 (1.844/s)

1	9 mins
2	9 mins
3	X
4	X
5	X
6	X

Comments/Observations:

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

# Vogle I & E Study - Canal Entrainment Sampling Data Sheet\*

Collected by: ARD/GRD  
 Date: 5/7/08  
 Canal Water Stage to top rail 23.2 ft<sup>(a)</sup>  
 Depth of Pump Deployment 24 ft

Pumps: 2 electric Tsurumi LB3-750 type with 73 gpm capacity at level head

	DAY 1	DAY 2	NIGHT 1	NIGHT 2
Time start (HRS)	0842	1500	2100	0310
Time stop (HRS)	1445	2100	0305	0924
Total pumping time (mins)	333	360	365	374
Calculated sample flow volume (m <sup>3</sup> /s)	80.7	87.2	88.4	90.6

## Notes:

Flow volume flow based on depth and river stage and performance curve: 64.0 gals/min

\* 6 hour samples are archived (type A samples)

\* day and night sample components are composited for laboratory analysis (type C samples)

~0242 HRS River Stage @ 23.2'

# Vogle I & E Study - Sample Chain Of Custody

Collected by: APD/GPD

Sample No.	Integrated Sample ID and Collection Date	Approximate Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
		-0000 HRS	5% formalin or 10% formalin Wet Ice	✓	✓
1	ENLD1A	1445 HRS	5%		
2	ENLD2A	2100 HRS			
3	ENLDCOMP	2100 HRS			
4	ENLN1A	0305 HRS			
5	ENLN2A	0924 HRS			
6	ENLNCOMP	0924 HRS			
7	IMDA	2000	5%		
8	IMNA	0800	X		
9	SWLD1A	1014 HRS	5%		
10	SWLD2A	1626 HRS			
11	SWLDCOMP	1626 HRS			
12	SWMD1A	0945 HRS			
13	SWMD2A	1555 HRS			
14	SWMDCOMP	1555 HRS			
15	SWRD1A	0917 HRS			
16	SWRD2A	1528 HRS			
17	SWRDCOMP	1528 HRS			
18	SWLN1A	2159 HRS			
19	SWLN2A	0340 HRS			
20	SWLNCOMP	0340 HRS			
21	SWMN1A	2130 HRS			
22	SWMN2A	0312 HRS			
23	SWMNCOMP	0312 HRS			
24	SWRN1A	2100 HRS			
25	SWRN2A	0244 HRS			
26	SWRNCOMP				
27					
28					
29					
30					

EN = entrainment sample      D1 = first day sample      C = composited 1st and 2nd day or night samples  
 IM = impingement sample      N2 = second night sample  
 SW = source water sample      A = archived 6-hour sample

Relinquished by: Larry Dold      Date: 5/8/08      Time: ~1800 HRS  
 Received by: Gary B. Dye      Date: 5/8/08      Time: 1801 HRS

---

**From:** Middlebrooks, Kenneth D.  
**Sent:** Thursday, April 03, 2008 12:00 PM  
**To:** Dodd, Anthony Ray; Broadwell, Tom L.; VNP Dispatchers; Williams, A. L. (Tony)  
**Cc:** Stuhaan, Chuck E.; Walden, Kevin C.  
**Subject:** FW: POD ADDITION: Work at the river water intake structure

Activities are in the schedule for the next 6 months for operations to run the screens for 15 minutes every other week on Wednesday morning, Wednesday night and Thursday morning. Security has now been checked on all the activities. Are there any other support needs for this project?

---

**From:** Stuhaan, Chuck E.  
**Sent:** Thursday, April 03, 2008 12:19 PM  
**To:** Williams, A. L. (Tony); VNP Dispatchers  
**Cc:** Middlebrooks, Kenneth D.; Dyar, Ken C.  
**Subject:** RE: POD ADDITION: Work at the river water intake structure

Tony,

The activity is 2OPS-OAO02 and is currently on the schedule. Let me know if any additional comments need to be added to the activity.

Chuck

---

**From:** Williams, A. L. (Tony)  
**Sent:** Thursday, April 03, 2008 12:10 PM  
**To:** Folker, Robert E.  
**Cc:** Stuhaan, Chuck E.; Middlebrooks, Kenneth D.; Dyar, Ken C.  
**Subject:** POD ADDITION: Work at the river water intake structure

Tony Dodd and Tom Broadwell with GPC Environmental Field Services will be performing impingement and entrainment sampling at the Vogtle river water intake structure Tuesday, April 8 through Thursday, April 10. They will be working in the area through night and day hours for approximately 48 hours and are requesting Gate 12 remain open during that time.

They will be contacting the Unit 2 Operator periodically to ask for assistance to have the traveling screens at the intake structure rotated on three instances during the study. Kevin Walden and D'Andre Manigo are the onsite contacts. Please include this activity in the POD for 8 – 10 April. Thanks for your help and please let me know if you have any questions.

*TONY WILLIAMS*  
*SECURITY COORDINATOR*  
*4445/768*

---

**From:** Middlebrooks, Kenneth D.  
**Sent:** Thursday, April 17, 2008 8:15 PM  
**To:** Dodd, Anthony Ray; Montz, Matthew Thomas; Stuhaan, Chuck E.; VNP Dispatchers; Walden, Kevin C.; Williams, A. L. (Tony); Dyar, Ken C.  
**Cc:** Chambers, William Carlton; Candler, W. Jim  
**Subject:** RE: P.O.D. -- Plant Vogtle River and Intake Studies

Activities are in the schedule.

---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, April 17, 2008 02:10 PM  
**To:** Middlebrooks, Kenneth D.; Montz, Matthew Thomas; Stuhaan, Chuck E.; VNP Dispatchers; Walden, Kevin C.; Williams, A. L. (Tony); Dyar, Ken C.  
**Cc:** Chambers, William Carlton; Candler, W. Jim  
**Subject:** P.O.D. -- Plant Vogtle River and Intake Studies

Tony Dodd and Joey Slaughter of GPC Environmental Field Services will be performing aquatic impingement and entrainment sampling at the Plant Vogtle river water intake structure and source water plankton sampling on the Savannah River during April 22-24. We will be working in the area on a sampling schedule requiring 6-hr sampling intervals through night and day hours for approximately 48 hours and are requesting that Gate 12 and the entrance gate to the intake building remain open during that time. We will contact the on-shift Unit 2 Operator periodically during the event to ask for assistance to have the traveling screens at the intake structure rotated on three instances during the study (0830 HRS and 2030 HRS on WED and 0830 HRS on Thursday). Kevin Walden and D'Andre Manigo are the onsite contacts. Please include this activity in the POD for 22-24 April.

Thanks for your help and please contact us if you have any questions.

Tony Dodd, CFP  
Environmental Specialist  
Georgia Power Environmental Lab  
5131 Maner Rd.  
Smyrna Ga 30080  
Ph: 404-799-2142  
Fax: 404-799-2141  
Cell: 770-550-2502  
LINC Radio: 1\*20\*12502  
Email: ardodd@southernco.com

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---

**From:** Manigo, D'Andre  
**Sent:** Monday, March 24, 2008 6:27 AM  
**To:** Montz, Matthew Thomas  
**Cc:** Walden, Kevin C.  
**Subject:** RE: Sampling in intake canal

*Matt*  
*Could you send me all the instructions an or process in which this will be done. Than plan seems a lot more justifiable. I need would like to run it by our management and make sure that this plan understood by all.*

---

**From:** Montz, Matthew Thomas  
**Sent:** Friday, March 21, 2008 3:09 PM  
**To:** Walden, Kevin C.; Manigo, D'Andre  
**Subject:** RE: Sampling in intake canal

Understood! We will proceed with the original plan of pumping from the bank of the intake canal.

**Matthew T. Montz**  
Office 205-992-5629

---

**From:** Walden, Kevin C.  
**Sent:** Friday, March 21, 2008 1:54 PM  
**To:** Montz, Matthew Thomas; Manigo, D'Andre  
**Subject:** RE: Sampling in intake canal

Matt,  
We have talked with both Steve and Doug about using a boat inside the intake structure for plankton sampling and they both had serious issues with this plan. Your best course of action will be to plan on using a pump of to the side of the canal.  
Thanks,

*Kevin Walden*

---

**From:** Montz, Matthew Thomas  
**Sent:** Thursday, March 20, 2008 8:46 AM  
**To:** Manigo, D'Andre; Walden, Kevin C.  
**Subject:** Sampling in intake canal

We would like to try getting a small boat with a pump in the intake canal for sampling. This would avoid us having to suspend a cable or rope across the canal. We could instead, float in on a boat, take our sample with a water pump and get out.

How do you all feel about this approach?

**Matthew T. Montz**  
Environmental Specialist  
Southern Nuclear Operating Company  
Office 205-992-5629

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---

**From:** Dyar, Ken C.  
**Sent:** Thursday, April 03, 2008 8:38 AM  
**To:** Dodd, Anthony Ray; Kitchens, Cohen J.; McQuillen, Thomas  
**Cc:** Blanton, Stan (Balch); Manigo, D'Andre; Walden, Kevin C.; Montz, Matthew Thomas  
**Subject:** RE: Work at the river water intake structure - Plan of the Day (POD)

We will support.

*Ken Dyar*  
**Security Manager**  
**Vogtle Electric Generating Plant**  
**706.826.3637 office**  
**334.520.1471 mobile**  
**LINC radio 1\*215\*1471**

---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, April 03, 2008 9:09 AM  
**To:** Dyar, Ken C.; Kitchens, Cohen J.; McQuillen, Thomas  
**Cc:** Blanton, Stan (Balch); Manigo, D'Andre; Walden, Kevin C.; Montz, Matthew Thomas  
**Subject:** Work at the river water intake structure - Plan of the Day (POD)

Tony Dodd and Tom Broadwell with GPC Environmental Field Services will be performing impingement and entrainment sampling at the Vogtle river water intake structure Tuesday, April 8 through Thursday, April 10. They will be working in the area through night and day hours for approximately 48 hours and are requesting Gate 12 remain open during that time. They have key to access the intake structure and boat ramp gates. They will be contacting the Unit 2 Operator periodically to ask for assistance to have the traveling screens at the intake structure rotated on three instances during the study.

Once onsite, Tony will contact Vogtle Security at the start and end of sampling. Kevin Walden and D'Andre Manigo are the onsite contacts. Please include mention of this activity in the POD for 8 – 10 April. Thanks for your help and please let me know if you have any questions.

Tony Dodd, CFP  
Environmental Specialist  
Georgia Power Environmental Lab  
5131 Maner Rd.  
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attachments. Thank you.

---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, April 03, 2008 8:00 AM  
**To:** Walden, Kevin C.; Montz, Matthew Thomas  
**Cc:** Blanton, Stan (Balch); 'Coutant, Chuck/Nancy'  
**Subject:** Entrainment sampling intake canal waters at Plant Vogtle

Kevin,

The revised plan to sample water from the intake canal during the week of April 7 involves the GPC Field Crew staging two portable submersible pumps on the top of the bank of the canal and at a location where we can reach the water with the shortest distance possible. The electric pumps (Tsurumi or Multiquip Brand) will be powered by a gasoline powered generator. Each pump draws 110 volts and 6.9 amps and pumps via a standard 40' long 2-inch diameter discharge at 73 gpm (gallons per minute) with a maximum head of 60 feet. Each pump weighs approximately 35 lbs and will be manually deployed with 7/8 inch diameter nylon rope over the side of the canal bulkhead into the water. Each pump suspension rope will be secured by tying the rope onto the base of a handrail stanchion. Flow from each pump discharge hose will be dispensed into and through a 500 micron NITEX mesh plankton net (with a 0.5 meter opening and 3.75 inch cod end with 500 micron mesh strainer bucket) suspended into a plastic 55 gallon drum. Openings in the bottom of each drum will provide a means for pumped water to be sieved through the nets and returned to the canal at the top of the bulkhead. The drums will be placed on a poly tarp to prevent run-off erosion. The pump system and associated equipment will be removed following each sampling event. We plan to set up on Tuesday for the first pumping pilot test. The pumping/entrainment sampling will take place over a 24-hr period during the sampling trip sometime during Tuesday through Thursday. Samples will be pulled from the nets every 6 hours. Captured aquatic organisms will be preserved in 5% formalin and labeled in 1- or 2- liter size plastic jars. The crew will take the samples to the GPC lab in Smyrna, GA following site demobilization. Please contact me if you have any questions.

Tony Dodd, CFP  
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---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, April 03, 2008 1:24 PM  
**To:** Middlebrooks, Kenneth D.; VNP Dispatchers; Williams, A. L. (Tony)  
**Cc:** Stuhaan, Chuck E.; Walden, Kevin C.; Montz, Matthew Thomas  
**Subject:** RE: POD ADDITION: Work at the river water intake structure

**Attachments:** Impingement Schedule\_Vogtle.xls

Gentlemen,

Thanks very much for your reply and support on this project. Our only added request is that the operators try to rotate the screens as close to 0800 HRS EST on WED a.m., 2000 HRS Wed p.m., and again at 0800 Thursday a.m. during each designated sampling week. Their efforts with the timing will help standardize sampling effort and ultimately aid in data interpretation at the end of the project.

Also, as a comment, the field sampling schedule will fall back one week in July. Please see the attached schedule of impingement sampling dates, whereas the sampling date shown on the spreadsheet is intended to indicate the Wed start-up each time. If GPC's field crew encounters unforeseen scheduling difficulties along the way, we will contact you ahead of time as far in advance as possible to discuss and adjust, if possible. Please contact me if you have any questions and we appreciate your support especially during the maintenance outage.



Impingement  
Schedule\_Vogtle.xls..

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---

**From:** Middlebrooks, Kenneth D.  
**Sent:** Thursday, April 03, 2008 1:00 PM  
**To:** Dodd, Anthony Ray; Broadwell, Tom L.; VNP Dispatchers; Williams, A. L. (Tony)  
**Cc:** Stuhaan, Chuck E.; Walden, Kevin C.  
**Subject:** FW: POD ADDITION: Work at the river water intake structure

Activities are in the schedule for the next 6 months for operations to run the screens for 15 minutes every other week on Wednesday morning, Wednesday night and Thursday morning. Security has now been checked on all the activities. Are there any other support needs for this project?

---

**From:** Stuhaan, Chuck E.  
**Sent:** Thursday, April 03, 2008 12:19 PM  
**To:** Williams, A. L. (Tony); VNP Dispatchers

**Cc:** Middlebrooks, Kenneth D.; Dyar, Ken C.  
**Subject:** RE: POD ADDITION: Work at the river water intake structure

Tony,

The activity is 2OPS-OAO02 and is currently on the schedule. Let me know if any additional comments need to be added to the activity.

Chuck

---

**From:** Williams, A. L. (Tony)  
**Sent:** Thursday, April 03, 2008 12:10 PM  
**To:** Folker, Robert E.  
**Cc:** Stuhaan, Chuck E.; Middlebrooks, Kenneth D.; Dyar, Ken C.  
**Subject:** POD ADDITION: Work at the river water intake structure

Tony Dodd and Tom Broadwell with GPC Environmental Field Services will be performing impingement and entrainment sampling at the Vogtle river water intake structure Tuesday, April 8 through Thursday, April 10. They will be working in the area through night and day hours for approximately 48 hours and are requesting Gate 12 remain open during that time.

They will be contacting the Unit 2 Operator periodically to ask for assistance to have the traveling screens at the intake structure rotated on three instances during the study. Kevin Walden and D'Andre Manigo are the onsite contacts. Please include this activity in the POD for 8 – 10 April. Thanks for your help and please let me know if you have any questions.

*TONY WILLIAMS*  
*SECURITY COORDINATOR*  
*4445/768*

All sample types assume  
ultimate 24-hr composite  
samples for lab processing

Table \_\_\_\_\_. Plant Vogtle Impingement-Entrainment Assessment Study Sampling Schedule 2008

	Impingement					
Sample Dates	Day Sample		End night Sample			
	Start Time	Mid Time	End Time	3.5 day trips	2 day trips	Completed
	Wed a.m.	Wed p.m.	Thur a.m.			
18-Feb-08	8:00	20:00	8:00	x		x
3-Mar-08	8:00	20:00	8:00	x		x
17-Mar-08	8:00	20:00	8:00	x		x
8-Apr-08	8:00	20:00	8:00	x		
22-Apr-08	8:00	20:00	8:00	x		
6-May-08	8:00	20:00	8:00	x		
20-May-08	8:00	20:00	8:00	x		
10-Jun-08	8:00	20:00	8:00	x		
24-Jun-08	8:00	20:00	8:00	x		
15-Jul-08	8:00	20:00	8:00	x		
29-Jul-08	8:00	20:00	8:00	x		
12-Aug-08	8:00	20:00	8:00	x		
26-Aug-08	8:00	20:00	8:00	x		
10-Sep-08	8:00	20:00	8:00		x	
24-Sep-08	8:00	20:00	8:00		x	
8-Oct-08	8:00	20:00	8:00		x	
22-Oct-08	8:00	20:00	8:00		x	
5-Nov-08	8:00	20:00	8:00		x	
19-Nov-08	8:00	20:00	8:00		x	
3-Dec-08	8:00	20:00	8:00		x	
17-Dec-08	8:00	20:00	8:00		x	
14-Jan-08	8:00	20:00	8:00		x	
28-Jan-08	8:00	20:00	8:00		x	
11-Feb-08	8:00	20:00	8:00		x	

12-month schedule



---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, April 03, 2008 2:07 PM  
**To:** Montz, Matthew Thomas  
**Subject:** Field data sheets collected to date

**Attachments:** 1st March Event.pdf; 2nd March Event.pdf

Draft Documents

Matt,

Per your request. Please find available electronically scanned field data sheets attached.



1st March  
Event.pdf (271 KB)



2nd March

Event.pdf (434 KB)

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# Vogtle I & E Study - Sample Chain Of Custody

Collected by: TD/TB

Sample No.	Integrated Sample ID and Collection Date	Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
	Example I.D. SL3A-031008	-0000 HRs	5% formalin or 10% formalin Wet Ice	✓	✓
1	SWLN1A-031108	1135	5%6		✓
2	SWLD2A-031108	1847			✓
3	SWLcomp-D-031108	1847			
4	SWMD1A-031108	1213			✓
5	SWMD2A-031108	1917			✓
6	SWMcomp-D-031108	1917			
7	SWRD1A-031108	1238			✓
8	SWRD2A-031108	1948			✓
9	SWRcomp-D-031108	1948			
10	SWLN1A-031108	2057			✓
11	SWLN2A-031208	0238			✓
12	SWLcomp-N-031208	0238			
13	SWMN1A-031108	2128			✓
14	SWMN2A-031208	0307			✓
15	SWMcomp-N-031208	0307			
16	SWRN1A-031008	2148			✓
17	SWRN2A-031208	0334			✓
18	SWRcomp-N-031208	0334			
19					
20					
21					
22					
23					
24					
25					

'Sample Type  
 'L,M,R = location leftbank, mid-channel, or right bank facing upstream or to intake structure  
 SL3A-031008 'Digits 1,2,3,4 represent sample period day1 vs day2 vs night 1 vs night 2  
 'Nets 1 and 2 composited (A) or Net 2 individual sample to be archived (A)  
 'Two digit month day year

Relinquished by: TD Date: 3/13/08 Time: 0845  
 Received by: Tom Brookwell Date: 3/13/08 Time: 0845

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD, TUS

Date: 3/11/08

River/Water Conditions: river stage down ~ 3' / turbid conditions

Circle One : Source Water Sampling Entrainment Sampling

DAY #1

	Depth (m)	Time at Depth (mins)
Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank (facing upstream)		
Time start (HRS)	1	3
Current meter start count	2	3
Current meter stop count	3	3
Time stop (HRS)	3.5	3
Total time for retrieval (mins)	5	
Calculated sample flow volume (m <sup>3</sup> /s)	16	

Location: Circle one Left Bank <u>Mid-Channel</u> Right Bank facing upstream		
Time start (HRS)	1	3
Current meter start count	2	3
Current meter stop count	3	3
Time stop (HRS)	4	3
Total time for retrieval (mins)	13	
Calculated sample flow volume (m <sup>3</sup> /s)	4.5	Max

Location: Circle one Left Bank Mid-Channel <u>Right Bank</u> facing upstream		
Time start (HRS)	1	3
Current meter start count	2	3
Current meter stop count	3	3
Time stop (HRS)	4	3
Total time for retrieval (mins)	13	
Calculated sample flow volume (m <sup>3</sup> /s)		

Comments/Observations:

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / TEB

Date: 3/11/08

River/Water Conditions: not at below previous night's stage / turbid

Circle One : Source Water Sampling    Entrainment Sampling

DAY 2

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

1847
62268
85573
1904
17

Time at  
Depth  
(m)    Depth  
(mins)

1	3
2	3
2.5	3
2.0	3
1.1m	3
<i>5 min / hour / at bottom w/ anchoring</i>	

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

1917
85857
103980
1932
15

1	3
2	3
3	3
4	3
+ retrieval	

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

1948
104002
110454
2012
28

1	6
2	6
3	6
4	6

Comments/Observations:

*H<sub>2</sub>O Temp = 13°C } MIG Thermometer  
Air Temp = 17°C }  
Light precipitation / overcast*

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: JD, TCB

Date: 3/10/08

River/Water Conditions: relatively high stage, swift current/turbid

Circle One : Source Water Sampling    Entrainment Sampling

Night 1

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2145
000,000
019,815
2157
15
104.4 m <sup>3</sup>

Depth (m)    Time at Depth (mins)

1	3
2	3
3	3
4	3
5	3

Location: Circle one Left Bank    Mid-Channel    Right Bank    facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)



Location: Circle one Left Bank    Mid-Channel    Right Bank    facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)



Comments/Observations:

First sample attempt, first trip

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: JD / HLB

Date: 3/12/08

River/Water Conditions:

reduced stage 2 ft lower tonight

Circle One: Source Water Sampling    Entrainment Sampling

Night 2

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)

0238

Current meter start count

150885

Current meter stop count

172082

Time stop (HRS)

0253

Total time for retrieval (mins)

15

Calculated sample flow volume (m<sup>3</sup>/s)

Depth  
(m)

Time at  
Depth  
(mins)

1	3
2	3
2.5	3
2	3
1	3

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

0307

Current meter start count

172064

Current meter stop count

188292

Time stop (HRS)

0318

Total time for retrieval (mins)

12

Calculated sample flow volume (m<sup>3</sup>/s)

1	3
2	3
3	3
4	3

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

0334

Current meter start count

188252

Current meter stop count

210443

Time stop (HRS)

0349

Total time for retrieval (mins)

15

Calculated sample flow volume (m<sup>3</sup>/s)

1	3
2	3
3	3
4	3

Comments/Observations:

Air Temp down to 10°C

Water Temp @ 12°C

Weather, clearing & cooler, falling river stage.

PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM					
Sample Information				Page: <u>1</u> of <u>3</u>	
Collector(s): <u>TD HLB</u>					
12-hour Period (circle)					
Start Date	<u>3/11/08</u>	Time	<u>2030</u>	Remarks: <u>NIGHT</u>	
End Date	<u>3/12/08</u>	Time	<u>0914</u>		
		Elapsed Time			
Plant and CWIS Operating Conditions					
	% Load	Pump Flow (gpm)		No. of VTS Operating	
Start					
Finish		<u>2 pumps</u>		<u>3 of 4 units &amp; service</u>	
<u>at Waynesboro</u>					
	River Stage (ft.)				
Start	<u>~11.5</u>	<u>~10,000 cfs</u>			
Finish	<u>~8.3</u>	<u>~6,400 cfs</u>			
Water Temperature (°C)					
Start	<u>12</u>				
Finish	<u>13</u>				
Field Conditions/Other Observations					
<u>Clear weather, 40°F. light winds up to ~0-7 Kt</u>					

Event #

Entered by:  
Date: / /

### Sample Information

**Collector(s):**

TD / TLB

Page: 2 of 3

DAY

# NIGHTY

**12-hour Period (circle)**

**Start Date**

3/11/08

Time **29'30****End Date**

3/12/08

Time 0925

## Elapsed Time

Species	TL (mm)	Weight (g)	Condition/Comment	Voucher?	Final ID
hoochoke	79	8	live / good cond	✓	← TD
off-shad	114	11	good body cond / recently introduced	✓	← TD
blackbanded darter	62	2	" "	✓	← TD
redbreast sunfish	44	0.5	" "	✓	← TD
redbreast sunfish	43	0.5	" "	✓	← TD
redbreast sunfish	59	0.5	" "	✓	← TD
bluegill	50	20.5	" "	✓	← TD
bluegill	51	20.5	" "	✓	← TD
END					

Event #

**Entered by:**

Date: / /





# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / TUB

Date: 3/10/08 - 3/11/08

River/Water Conditions: High ~ 10Kt cfs

Circle One : Source Water Sampling    Entrainment Sampling

	Depth (m)	Time at Depth (mins)
Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)		
Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream		
Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream		
Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Comments/Observations:

*\* Ichthyoplankton net sampling in canal unsuccessful.  
Even w/ adjustment closer to the trash rack, velocity  
is not sufficient enough to provide sampling conditions  
for this gear type. T.D.*

PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM																	
Sample Information				Page: <u>1</u> of <u>1</u>													
Collector(s): <u>TD, BB</u>																	
12-hour Period (circle) <span style="float: right;">Remarks: <u>NO TD</u></span>																	
Start Date <u>3-25-08</u>		Time <u>0830</u>		<u>DAY</u> <u>NIGHT</u>													
End Date <u>3-26-08</u>		Time															
		Elapsed Time															
Plant and CWIS Operating Conditions																	
	No. Pumps	Pump Flow (gpm)		No. of VTS Operating													
Start				<u>2</u>													
Finish																	
River Stage (ft.)			Physicochemical parameters:														
Start		<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <u>-5500</u>  <u>SPS</u>  <u>@ 1030</u>  <u>falling</u>  <u>stage</u> </div> <div> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td>D.O.</td> <td><u>8.8</u></td> <td>mg/L</td> </tr> <tr> <td>pH</td> <td><u>7.0</u></td> <td>SU</td> </tr> <tr> <td>Cond.</td> <td><u>103.4</u></td> <td>uS/cm</td> </tr> <tr> <td>Turbidity</td> <td><u>0.8</u></td> <td>NTU</td> </tr> </table> </div> </div>				D.O.	<u>8.8</u>	mg/L	pH	<u>7.0</u>	SU	Cond.	<u>103.4</u>	uS/cm	Turbidity	<u>0.8</u>	NTU
D.O.	<u>8.8</u>					mg/L											
pH	<u>7.0</u>					SU											
Cond.	<u>103.4</u>					uS/cm											
Turbidity	<u>0.8</u>	NTU															
Finish																	
Water Temperature (°C)																	
Start	<u>15.5</u>																
Finish	<u>15.1</u>																
Location of Measurement:																	
<u>in-stn left bank, surface</u>																	
Field Conditions/Other Observations																	
<p><u>Left Bank = waypoint 59</u>      <u>Air Temp 12.95</u></p> <p><u>N 33°09'04.6"</u></p> <p><u>W 81°45'16.3"</u></p> <p><u>* called Unit 2 operator ~ 0813 HRS</u></p> <p><u>Swans noticed ~ 0825 HRS</u></p> <p><u>* Impingement Period for Daytime started ~ 0830</u></p> <p><u>* Water temp fell to ~ 14.5°C in pm of 3/25/08</u></p>																	

Event #

Entered by:  
Date: / /

# PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM

Sample Information

Collector(s):

TD / BB

Page: 1 of 1

12-hour Period (circle)

DAY

NIGHT

Start Date

3/26/08

Time 0830

End Date

3/26/08

Time 2000

Elapsed Time 11.5

Species	TL (mm)	Weight (g)	Condition/Comment	Voucher?	Final ID
NO FISH					

Event #

Entered by:

Date: / /

# PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM

Sample Information

Page: 1 of 1

Collector(s): TD/BB

12-hour Period (circle)

DAY

Remarks:

NIGHT

Start Date 3/26/03  
End Date 3/27/03

Time 2000  
Time 0900

Elapsed Time

## Plant and CWIS Operating Conditions

	No. Pumps	Pump Flow (gpm)	No. of VTS Operating
Start			
Finish			<u>2</u>

	River Stage (ft.)
Start	
Finish	

*Falling*

## Physicochemical parameters:

D.O.		mg/L
pH		SU
Cond.		uS/cm
Turbidity		NTU

	Water Temperature (°C)
Start	<u>15.5</u>
Finish	<u>15.6</u>

Location of Measurement:

## Field Conditions/Other Observations

*River stage falling.*

Event #

Entered by:  
Date: / /

## Sample Information

TD/BB

DAY

## NIGHT

Page: 1 of 1

**12-hour Period (circle)**

**Start Date**

2/26/08

Time

2000

**End Date**

2/27/08

## Time

0900

**Elapsed Time**

[illegible]

Entered by:

Date: / /

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD, RB

Date: 8/26/09

River/Water Conditions: see below

Circle One : Source Water Sampling    Entrainment Sampling

*Day 1*

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1536
097103
114434
1549
13

Depth (m)      Time at Depth (mins)

1	3
2	3
3	3
4	3

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1604
115757
129796
1617

1	3
2	3
3	3
4	3

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1629
129810
145960
1641

1	3
2	3
3	3
4	3

Comments/Observations:

*Weather - sunny, warm to ~70°F, wind S-southly 5-10 kts.  
Water - highly turbid @ surface*

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / 132

Date: 3/26/08

River/Water Conditions: rain & face / moderate / swift current

Circle One : Source Water Sampling Entrainment Sampling

Day 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

1915
145463
163999
1928
1928

Depth (m)      Time at Depth (mins)

1	3
2	3
3	3
4	3

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

1939
164002
178353
1952
1952

1	3
2	3
3	3
4	3

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)

2004 HRS
178349
194502
2017
2017

1	3
2	3
3	3
4	3

Comments/Observations:

clear skies, cooling  
- River stage dropped ~ 1/2 - 3/4 foot since midday.  
- Transect for ichthyoplankton sampling near  
Rm 72 ~ 20' upstream - drop anchored at next upstream weir



# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: J.D. BB

Date: 3-25-08

River/Water Conditions: lightly turbid on surface / swift current

Circle One: Source Water Sampling    Entrainment Sampling

*Night #1*

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2035
000200
016510
2049
14

Depth (m)    Time at Depth (mins)

1	3
2	3
3	3
4	3
	3.6 m

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2122
016200
027493
2135

1	3
2	3
3	3
4	3
	4.5 m (max)

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2154
028330
040013
2207
13

1	3
2	3
3	3
4	3
	4.1 max

Comments/Observations:

— mid-channel WP = N 33°09'04.2  
W 81°45'17.6

— Heavy detritus load  
at 3.5 to 4.5 meters

Right bank WP = #60  
N 33°09'05.0'  
W 081°45'17.7"

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / BSS

Date: 3/26/08

River/Water Conditions: Light turbid / slight current

Circle One : Source Water Sampling Entrainment Sampling

Night 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0229	3
Current meter start count	041300	3
Current meter stop count	057596	3
Time stop (HRS)	0244	3
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0306	3
Current meter start count	059700	3
Current meter stop count	073487	3
Time stop (HRS)	0319	3
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0403	3
Current meter start count	076070	3
Current meter stop count	090911	3
Time stop (HRS)	0416	3
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Comments/Observations:

clear skies, ~42°F, winds 0-5 k, 3/4 moon  
Heavy detritus - all main channel locations

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD/133      W& Params      ~1454 HRS  
 Date: 3/26/08      Hydrulab 5      45800      Turb: 0      NTU  
 River/Water Conditions: moderate current, clear      surface  
 Circle One : Source Water Sampling      Entrainment Sampling      W Temp 15.6      D.O. 9.0      pH 6.8      Cond. 87.6

\* Pilot Test      works good - assume 425 gpm  
CANAL ENTRANCE

Location: Circle one Left Bank      Mid-Channel      Right Bank (facing upstream)

Time start (HRS)  
 Current meter start count  
 Current meter stop count  
 Time stop (HRS)  
 Total time for retrieval (mins)  
 Calculated sample flow volume (m<sup>3</sup>/s)

DAY 1

1340
1514
90

Time at  
 Depth      Depth  
 (m)      (mins)

Surface	max depth

Location: Circle one Left Bank      Mid-Channel      Right Bank facing upstream

Time start (HRS)  
 Current meter start count  
 Current meter stop count  
 Time stop (HRS)  
 Total time for retrieval (mins)  
 Calculated sample flow volume (m<sup>3</sup>/s)



Location: Circle one Left Bank      Mid-Channel      Right Bank facing upstream

Time start (HRS)  
 Current meter start count  
 Current meter stop count  
 Time stop (HRS)  
 Total time for retrieval (mins)  
 Calculated sample flow volume (m<sup>3</sup>/s)



Comments/Observations:

425 gpm pump / Honda 8. Hp GX240  
 3600 RPM Wacker PF3 pump.

~ 87 minutes = 150 m<sup>3</sup> / split into 2 500 m / Nitro mesh  
 \* located at most downstream corner of canal mouth

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / BK

Date: 3/26/08

River/Water Conditions: light turbid - flow ~ 5,000 cfs

Circle One : Source Water Sampling Entrainment Sampling

**DAY 2**      *Pump*

Location: Circle one Left Bank   Mid-Channel   Right Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0.5	5.4
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank   Mid-Channel   Right Bank facing upstream

Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Location: Circle one Left Bank   Mid-Channel   Right Bank facing upstream

Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

Comments/Observations:

\* southernmost / downstream corner of canal north.  
depth @ 0.5 m.

\* Called Unit 2 operator @ ~ 1900 HRS for a 2000 HRS rotation.

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: JD/BB  
 Date: 3/26/06  
 River/Water Conditions: moderate current/falling stage  
 Circle One : Source Water Sampling    Entrainment Sampling

**Night 1**                      **Pump**

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0.5	surf
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

**Night 2**

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

	Depth (m)	Time at Depth (mins)
Time start (HRS)	0.5	surf
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

*River stage Raising*

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

	Depth (m)	Time at Depth (mins)
Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

**Comments/Observations:**

*\* falling river stage / ~ 4" or more of water sheet falling heads visible @ 2128 HRS.*  
*\* clear, cool night - falling temps,*

# Vogle I & E Study - Sample Chain Of Custody

Collected by: TD/BB

Sample No.	Integrated Sample ID and Collection Date	Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
	Example I.D. SL3A-031008	-0000 HRs	5% formalin or 10% formalin Wet Ice	✓	✓
1	SWLDIA-032608	1570	5-6		✓
2	SWLD2A-032608	1900			✓
3	SWL Comp-032608-D	1900			
4	SWMDIA-032608	1535			✓
5	SWMD2A-032608	1930			✓
6	SWM Comp-032608-D	1930			
7	SWRDIA-032608	1555			✓
8	SWRD2A-032608	1955			✓
9	SWR Comp-032608-D	1955			
10	SWLNIA-032508	2100			✓
11	SWLN2A-032608	0230			✓
12	SWL Comp-032608-N	0230			
13	SWM NIA-032508	2145			✓
14	SWM N2A-032608	0300			✓
15	SWM Comp-032608-N	0300			
16	SWR NIA-032508	2215			✓
17	SWR N2A-032608	0330			✓
18	SWR Comp-032608-N	0330			
19	ENLDIA-032608	1345			✓
20	ENLD2A-032608	1730			✓
21	ENL Comp-032608-D	1730			NO-TD/3/26/08
22	ENLDIA-032608	1912			✓
23	ENLN2A-032708	~0400			✓
24	ENL Comp 032708-N	0400			NO-TD-3/26/08
25					

Sample Type  
 L,M,R = location leftbank, mid-channel, or right bank facing upstream or to intake structure  
 SL3A-031008 Digits 1,2,3,4 represent sample period day1 vs day2 vs night 1 vs night 2  
 Nets 1 and 2 composited (A) or Net 2 individual sample to be archived (A)  
 Two digit month day year

Relinquished by: [Signature]

Date: 3/3/08

Time: 0936

Received by: [Signature]

Date: 3/3/08

Time: 0936

---

**From:** Dodd, Anthony Ray  
**Sent:** Wednesday, April 16, 2008 1:34 PM  
**To:** Montz, Matthew Thomas; 'Coutant, Chuck/Nancy'  
**Cc:** Blanton, Stan (Balch)

**Attachments:** 1st April Event.pdf



1st April Event.pdf  
(505 KB)

Please find the attached copy of field data sheets from the 8-10 April impingement and entrainment sampling event at Plant Vogtle.  
A trip report will follow soon.

Tony Dodd, CFP  
Environmental Specialist  
Georgia Power Environmental Lab  
5131 Maner Rd.  
Smyrna Ga 30080  
Ph: 404-799-2142  
Fax: 404-799-2141  
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LINC Radio: 1\*20\*15202  
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# Vogle I & E Study - Sample Chain Of Custody

Collected by: T.D., TLB

Sample No.	Integrated Sample ID and Collection Date	Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
	Example I.D. SWLD1A-031108	-0000 HRS	5% formalin or 10% formalin Wet ice	✓	✓
1	ENLD1A 040908	0920	5%		✓
2	ENLD2A 040908	1150			✓
3	ENLD COMP 040908	0920			
4	ENLN1A 040908 (2)	2050			✓
5	ENLN2A 040808 (1)	0253			✓
6	ENLN COMP 040908	0253			
7	INDA 040908	2055	10%		✓
8	IANA 041008	1000	10%		✓
9	SWLD1A 041008	0958	5%		✓
10	SWLD2A 040908	1700			✓
11	SWLD COMP 041008	1700			
12	SWMD1A 041008	0936			✓
13	SWMD2A 040908	1631			✓
14	SWM COMP 041008	1631			
15	SWRD1A 041008	0911			✓
16	SWRD2A 040908	1605			✓
17	SWR COMP 041008	1605			
18	SWLN1A 040908	2243			✓
19	SWLN2A 041008	0356			✓
20	SWLN COMP 041008	0356			
21	SWMN1A 040908	2218			✓
22	SWMN2A 041008	0351			✓
23	SWMN COMP 041008	0351			
24	SWRN1A 040908	2154			✓
25	SWRN2A 041008	0256	✓		✓

Note: ~~SWLD1A-031108~~ TD 4/14/08

SWLD1A-031108 = source water/bank Day time 1st sample 3 March 2008

EN = entrainment

A = Archive

D2 = day #2

COMP-N = composite of 1&2 night sample for processing

N1 = Night #1

N2 = Night #2 sample

D = Day

A = Archive

L = Left

R = Right

M = mid-channel

Relinquished by: TLB

Date: 4/10/08 Time: 1902

Received by: TLB

Date: 4/10/08 Time: 1902

IMC Trapping  
12-NR Samples

~~SWLD1A-031108~~ TD 4/14/08



# Vogtle I & E Study - Sample Chain Of Custody

Collected by: TD, TLB

Sample No.	Integrated Sample ID and Collection Date	Time of Collection	Preservative	Shipped to taxonomy lab	Archived at GPC Smyrna
	Example I.D. SWLD1A-031108	~0000 HRs	5% formalin or 10% formalin Wet Ice	✓	✓
1	<u>SWRN.com P 04/10/08</u>	<u>0256</u>	<u>5%</u>		
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Note:

SWLD1A-031108 = source water/bank Day time 1st sample 3 March 2008

EN = entrainment

A = Archive

D2 = day #2

COMP-N = composite of 1&2 night sample for processing

N1 = Night #1

N2 = Night #2 sample

A = Archive

Relinquished by: TD

Date: 4/10/08

Time: 1902

Received by: MS Broadwell

Date: 4/10/08

Time: 1902

PLANT VOGTLE IMPINGEMENT MONITORING DATA FORM																										
Sample Information				Page: <u>1</u> of <u>4</u>																						
Collector(s): <u>TD, JLB</u>																										
12-hour Period (circle) <span style="float: right;">Remarks: _____</span>																										
Start Date	<u>4-9-08</u>	Time	<u>0830</u>	<u>2055</u>																						
End Date	<u>4-10-08</u>	Time	<u>2055</u>	<u>1000</u>																						
Elapsed Time			<u>12:25</u>	<u>13:05</u>																						
Plant and CWIS Operating Conditions																										
	No. Pumps	Pump Flow (gpm)		No. of VTS Operating																						
Start	<u>2</u>			<u>3</u>																						
Finish	<u>2</u>																									
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;"></th> <th style="padding: 5px;">River Stage (ft.)</th> <th style="padding: 5px;"></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Start</td> <td style="padding: 5px;"><u>9.89</u></td> <td style="padding: 5px;">= 7130 cfs</td> </tr> <tr> <td style="padding: 5px;">Finish</td> <td style="padding: 5px;"><u>8.54</u></td> <td style="padding: 5px;">= 6090 cfs</td> </tr> </tbody> </table> </div> <div style="width: 50%;"> <p style="text-align: center; margin-bottom: 5px;"><i>on 4/15/08 just sunny</i></p> <p style="text-align: center; margin-bottom: 5px;">Physicochemical parameters:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="padding: 5px;">D.O.</td> <td style="padding: 5px;"><u>8.2</u></td> <td style="padding: 5px;">mg/L</td> </tr> <tr> <td style="padding: 5px;">pH</td> <td style="padding: 5px;"><u>6.7</u></td> <td style="padding: 5px;">SU</td> </tr> <tr> <td style="padding: 5px;">Cond.</td> <td style="padding: 5px;"><u>118.0</u></td> <td style="padding: 5px;">us/cm</td> </tr> <tr> <td style="padding: 5px;">Turbidity</td> <td style="padding: 5px;"><u>0.8</u></td> <td style="padding: 5px;">NTU</td> </tr> </tbody> </table> <p style="margin-top: 5px;">Temp <u>16.6</u> * See</p> <p style="margin-top: 5px;">Location of Measurement: <i>along primary data sheet</i></p> </div> </div>							River Stage (ft.)		Start	<u>9.89</u>	= 7130 cfs	Finish	<u>8.54</u>	= 6090 cfs	D.O.	<u>8.2</u>	mg/L	pH	<u>6.7</u>	SU	Cond.	<u>118.0</u>	us/cm	Turbidity	<u>0.8</u>	NTU
	River Stage (ft.)																									
Start	<u>9.89</u>	= 7130 cfs																								
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Cond.	<u>118.0</u>	us/cm																								
Turbidity	<u>0.8</u>	NTU																								
<div style="display: flex;"> <div style="width: 30%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="padding: 5px;">Water Temperature (°C)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Start</td> <td style="padding: 5px;"><u>17°</u></td> </tr> <tr> <td style="padding: 5px;">Finish</td> <td style="padding: 5px;"><u>17°</u></td> </tr> </tbody> </table> </div> <div style="width: 70%;"></div> </div>						Water Temperature (°C)		Start	<u>17°</u>	Finish	<u>17°</u>															
Water Temperature (°C)																										
Start	<u>17°</u>																									
Finish	<u>17°</u>																									
Field Conditions/Other Observations																										
<p style="font-size: 1.2em; margin-top: 20px;">* light overcast, varying trend</p>																										

Event #

Entered by:  
Date: / /

**WATER QUALITY SURVEY  
ENVIRONMENTAL LABORATORY**

**SURVEYOR4a**

*VEEP I+E*

SITE CODE	STATION	DATE	MM/DD/YY	AIR TEMP
		4-15-08		17.3C

*VEEP Boat Ramp*

WEATHER	TEAM
<i>clear/cold</i>	<i>CB</i>

TIME ON	TIME OFF	SECCHI
0938	0942	FT

WATER SAMPLES COLLECTED
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

DEPTH (METERS)	DO (ppm)	TEMP (C)	COND (umho/cm)	pH (UNITS)	TURB NTU
0.8	8.1	16.6	118.0	6.7	0.8
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

DEPTH (METERS)	DO (ppm)	TEMP (C)	COND (umho/cm)	pH (UNITS)	TURB NTU
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					

Remarks:

Added to Database

Initials:

Verified On:

Site Codes:

BU-BURTON

SE-SEED

RA-RABUN

TA-TALLULAH FALLS

TU-TUGALO

YO-YONAH

JA-Jackson

JU-Juliette

HA-HARDING

GR-GOAT ROCK

OL-OLIVER

NH-NORTH HIGHLANDS

BS-Bull Sluice

OC-Oconee

SI-SINCLAIR LAKE

SC-SINCLAIR COVES

WO-WORTH

Meter ID # *MS 45840*

Calibration Date

*4-1-14-108*

Signature

*CB*

## Date: / /



# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / +LB

Date: 4/10/00

River/Water Conditions: \_\_\_\_\_

Circle One : Source Water Sampling ☒ Entrainment Sampling

	Depth (m)	Time at Depth (mins)
<b>DAY 1</b>		
<b>DAY 2</b>		
<b>NIGHT 1</b>		
<b>NIGHT 2</b>		
Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank (facing upstream)		
Time start (HRS)		
Current meter start count		
Current meter stop count		
Time stop (HRS)		
Total time for retrieval (mins)		
Calculated sample flow volume (m <sup>3</sup> /s)		

0920
1500
5.4 HRS


Archive 26.1 m<sup>3</sup>

Sample 52.3 m<sup>3</sup>

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)



Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)



Comments/Observations:

- water stage / temp gage / tag line at Canal  
= 20.3 ft - 4-10 ft lower than last night.  
- Net 1 archive / Net 2 sample composite  
Generator = Multiquip 6000 watt - gas powered  
Model GA-6HA 20 A / 120V Honda 11.0 Hp Mod. GX340

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD, TLB

Date: 7-9-08

River/Water Conditions: \_\_\_\_\_

Circle One : Source Water Sampling Entrainment Sampling

DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1150 HRS  
STOPPED @ 1500 hr  
modification  
Restarted @ 1600 HRS  
18:10 6.2 HRS

Depth  
(m)

Time at  
Depth  
(mins)

Archive 28.3 m<sup>3</sup> Sample 56.7 m<sup>3</sup>

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

Comments/Observations:

Net 1 archive

Net 2 comp sample

Day composite sample  
= 109.0 m<sup>3</sup>

Night composite sample  
= 104.5 m<sup>3</sup>

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: FD, TRB

Date: 4-9-08

River/Water Conditions: \_\_\_\_\_

Circle One : Source Water Sampling Entrainment Sampling

DAY 1	DAY 2	NIGHT 1	NIGHT 2	Depth (m)	Time at Depth (mins)
Location: Circle one <u>Left Bank</u> Mid-Channel Right Bank (facing upstream)					
Time start (HRS)					
Current meter start count					
Current meter stop count					
Time stop (HRS)					
Total time for retrieval (mins)					
Calculated sample flow volume (m <sup>3</sup> /s)					

2050 HRS
0245 HRS

Archive 27.0 m<sup>3</sup> Sample 54.1 m<sup>3</sup>

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)



Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)  
Current meter start count  
Current meter stop count  
Time stop (HRS)  
Total time for retrieval (mins)  
Calculated sample flow volume (m<sup>3</sup>/s)



Comments/Observations:

Net 1 archive  
Net 2 comp. sample



# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD / HLB

Date: 4/8/08

River/Water Conditions: \_\_\_\_\_

Circle One : Source Water Sampling Entrainment Sampling

DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0253
0845
5.87 HRS

Depth  
(m)

Time at  
Depth  
(mins)


Archim 25.2 m<sup>3</sup> Sample 50.4 m<sup>3</sup>

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)



Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)



Comments/Observations: Met 1 archive / water sample composite

weather is calm, clear

temp ~ is ~ 58°F

water stage 20.2' water surface to top rail  
not changed

6000 watt generator

2-73 gpm submersible pumps each deployed to  
~4' deep at canal edge

pump 1 = 60' high variety / pump 2 = 37' ft high standard variety

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: TD 17CB

Date: 4/10/88

River/Water Conditions: mod. turbidity

Circle One : Source Water Sampling Entrainment Sampling

DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0911
367789
383821
0923
13
84.6

Vel = 1.8 ft/s

Depth (m) Time at Depth (mins)

1	4
2	4
3	4
X	

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0936
383820
401882
0948
13
95.3

2.0 ft/s

1	4
2	4
3	4
X	

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

0958
401879
421586
1000
13
103.9

(2.2 ft/s)

1	4
2	4
3	4
X	

Comments/Observations:

Weather - fog, partly cloudy, air temp = 13.0 °C  
River = mod. turbidity + current velocity  
H<sub>2</sub>O Temp = 17 °C

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: JD / TLO

Date: 4/8/08

River/Water Conditions: turbid, moderate current

Circle One: Source Water Sampling Entrainment Sampling

DAY 1 DAY 2 NIGHT 1 NIGHT 2

Location: Circle one Left Bank Mid-Channel Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1605
198864
208795
1617
1618 13 1.6 L/sec
75.6

Depth (m) Time at Depth (mins)

1	3
2	3
3	3
3.5	3

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1631
208798
229423
1643
1644 13 (2.3 L/s)
102.8

1	5
2	3
3	3
4	3

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

1700
229486
246548
1712
1713 13 (2.2 L/s)
100.5

1	4
2	4
3	4

Comments/Observations:

- water temp sat 18°C / sunny / partly cloudy
- light winds. Air temp ~ 76°F
- Sampling to 3 m / 4 per depth - much detritus /  
not clogging at 3.5 to 2 meter depths

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: J.D. / TCB

Date: 4/9/06

River/Water Conditions: turbid / mod. current

Circle One : Source Water Sampling    Entrainment Sampling

DAY 1    DAY 2    NIGHT 1    NIGHT 2

Location: Circle one Left Bank    Mid-Channel    Right Bank (facing upstream)

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2154
248462
264156
2206
2207 (13) 1.0 #/s
82.8

Depth  
(m)

Time at  
Depth  
(mins)

1	4
2	4
3	4
X	

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2218
268145
284313
2230
13    2.3 #/s
106.4

1	4
2	4
3	4
X	

Location: Circle one Left Bank    Mid-Channel    Right Bank facing upstream

Time start (HRS)

Current meter start count

Current meter stop count

Time stop (HRS)

Total time for retrieval (mins)

Calculated sample flow volume (m<sup>3</sup>/s)

2243
284282
304256
2255
13    2.3 #/s
105.3

1	4
2	4
3	4
X	

Comments/Observations:

- water temp = 16.9 °C
- clear night - temps falling to 60 °F
- limited the sampling depth to 3 m owing to heavy detritus mass deeper than 3 m.

# Vogle I & E Study - Source Water Community / Entrainment Sampling

Collected by: FD / TLB

Date: 4/10/08

River/Water Conditions: turbid/moderate

Circle One Source Water Sampling Entrainment Sampling

DAY 1	DAY 2	NIGHT 1	NIGHT 2			Depth (m)	Time at Depth (mins)
Location: Circle one <u>Left Bank</u> <u>Mid-Channel</u> Right Bank (facing upstream)							
Time start (HRS)				0346		1	4
Current meter start count				345705		2	4
Current meter stop count				367584		2.5	4
Time stop (HRS)				0338		<div style="text-align: center;"> <del>Shallower</del>  </div>	
Total time for retrieval (mins)				13 2.5 R/S			
Calculated sample flow volume (m³/s)				115.4			

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)				0321		1	4
Current meter start count				323460		2	4
Current meter stop count				345694		3	4
Time stop (HRS)				0333		<div style="text-align: center;"> </div>	
Total time for retrieval (mins)				13 2.5 R/S			
Calculated sample flow volume (m³/s)				117.3			

Location: Circle one Left Bank Mid-Channel Right Bank facing upstream

Time start (HRS)				0256		1	4
Current meter start count				304243		2	4
Current meter stop count				323452		3	4
Time stop (HRS)				0300		<div style="text-align: center;"> </div>	
Total time for retrieval (mins)				13.0 2.2 R/S			
Calculated sample flow volume (m³/s)				101.3			

Comments/Observations:

*As with all ichthyoplankton sampler collected before this date on this study, an archive sample is collected and preserved every 6 HRS. Day & Night sample component samples have each been composited, respectively.*

---

**From:** Dodd, Anthony Ray  
**Sent:** Thursday, May 15, 2008 9:06 AM  
**To:** Middlebrooks, Kenneth D.; Montz, Matthew Thomas; Stuhaan, Chuck E.; VNP Dispatchers; Walden, Kevin C.; Williams, A. L. (Tony); Dyar, Ken C.  
**Cc:** Chambers, William Carlton; Blanton, Stan (Balch)  
**Subject:** FW: P.O.D. -- Plant Vogtle River and Intake Studies

Tony Dodd of GPC Environmental Field Services will be leading and performing aquatic impingement and entrainment sampling at the Plant Vogtle water intake structure and on the Savannah River next week during 20-22 May. We will be working in the area on a sampling schedule requiring 6-hr sampling intervals through night and day hours for approximately 48 hours and are requesting that Gate 12 and the entrance gate to the intake building remain open during that time. We will contact the on-shift Unit 2 Operator periodically during the event to ask for assistance to have the traveling screens at the intake structure rotated on three instances during the study (0830 HRS and 2030 HRS on WED and 0830 HRS on Thursday). Kevin Walden and D'Andre Manigo are our team onsite contacts. Please include this activity in the POD for 20-22 May.

Thanks for your help in advance and please contact us if you have any questions.

Tony Dodd, CFP  
Environmental Specialist  
Georgia Power Environmental Lab  
5131 Maner Rd.  
Smyrna Ga 30080  
Ph: 404-799-2142  
Fax: 404-799-2141  
Cell: 770-550-2502  
  
LINC Radio: 1\*20\*15202  
Email: [ardodd@southernco.com](mailto:ardodd@southernco.com)

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**From:** Hannah Proctor [hproctor@normandeau.com]  
**Sent:** Thursday, May 22, 2008 3:43 PM  
**To:** Dodd, Anthony Ray  
**Subject:** FW: Vogtle samples  
**Attachments:** 20080522163009.pdf

Hello Tony,

I will be responsible for seeing the Vogtle ichthyoplankton samples through the processing and reporting stage. We received the first shipment of samples on May 20<sup>th</sup> (signed COC attached) and will start processing them next week. Coolers have been mailed back to you.

I have a couple of questions:

1. Are all the samples net samples?
2. In addition to the numerical station numbers (1-3, 1-6, 1-9, etc.); are you interested in having the station designation reflect the location of the sample, source water or canal entrainment?
3. We will receive the remaining samples in one batch, and when?
4. While the first shipment arrived OK; some samples were scrunched and one of the sample jars had broken (sample material recoverable). Would you help by seeing that the next shipment is packaged so that: jar lids are taped with electrical tape to avoid leaking and jars are packed tight inside the coolers to avoid getting crunched. We don't want to lose any samples, thanks!
5. I am assume that you anticipate receiving data for the entire collection period at once but don't see any notation as to when this is. Would by or before the end of August be acceptable?

Please let me know if you have any questions.

Thanks, Hannah  
Hannah Proctor  
Manager, Biology Laboratory  
Normandeau Associates, Inc.

**From:** Paul Geoghegan  
**Sent:** Wednesday, May 14, 2008 2:08 PM  
**To:** 'Tony Dodd'  
**Cc:** Hannah Proctor  
**Subject:** Vogtle samples

Tony:

Please ship the samples to the address below and to the attention of Hannah Proctor.

Paul

Paul Geoghegan  
Principal Scientist  
Normandeau Associates Inc.  
25 Nashua Road  
Bedford NH 03110

PH: 603 472 5191

6/2/2008

Please consider the environment before printing this e-mail.

Please consider the environment before printing this e-mail.





Georgia Power Environmental Laboratory  
5131 Maner Road, Bin 39110  
Smyrna, GA 30080

Phone: (404) 799-2100 Fax: (404) 799-2141  
Company: 8-530-2100 Fax: 8-530-2141

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB  
USE  
ONLY

Control No. CC- 27 68

Sample Delivery Group:

11 Page 1 of 1



12 Standard Turnaround Time



Rush in Business Days

(Must be cleared through Env. Lab. prior to shipment)

## PRESERVATIVE 20

Sample Type Key 22

G-Grab C-Composite  
O-Other

Matrix Key: 23

O-Oil SW-Surface Water  
S-Solid GW-Ground Water  
SL-Sludge WW-Waste Water  
W-Wipe DW-Drinking Water

## ANALYSIS REQUESTED 21

Preservative Key: 24

H-Hydrochloric Acid  
N-Nitric Acid  
S-Sulfuric Acid  
SH-Sodium Hydroxide  
SB-Sodium Bisulfide  
P-Phosphoric Acid  
ST-Sodium Thiosulfate  
H-Hg  
U-Uranium

LAB USE ONLY 25  
Comments

Company: 1 Georgia Power Company  
Report To: Tony Dodd  
Address: 2 5131 Maner Rd  
Smyrna, GA 30080  
Phone: 3 404 799 2142 Fax: 404 799 2141  
Contact: 4 Tony Dodd  
Project Location: 5 Plant Vogtle  
Account Number: 6 LAB 7600  
Special Instructions: 7 return coolers ASAP  
\*ardodd@sonthernco.com

Sample Shipment Date: 8

Sample Received Date: 9

Sampled By: 10

Print Name

Signature

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

Note:  
pressure and same  
vial collection

LAB USE ONLY 13 LAB ID	Sample 14 Number	Collection 15		Sample 16 Description	Sample Type 17	Matrix 18	No. of Containers 19										
		Date	Time														
	✓ 2-3	3/26/08	1900	source water				X									
	✓ 2-6	3/26/08	1930	" "				X									
	✓ 2-9	3/26/08	1955	" "				X									
	✓ 2-12	3/26/08	0230	" "				X									
	✓ 2-15	3/26/08	0300	" "				X									
	✓ 2-18	3/26/08	0330	" "				X									
	✓ 2-21	3/26/08	1730	canal / entrainment				X									
	✓ 2-24	3/27/08	0400	canal / entrainment				X									

Relinquished by: 26 Tony Dodd Date/Time 5/19/08 / 1100

Received by: 27 Kristen Rypur Date/Time 5/20/08 1000

Relinquished by: Date/Time

Received by: Date/Time

## LAB USE ONLY: Sample Disposition Information 28

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Georgia Power Environmental Laboratory  
5131 Maner Road, Bin 39110  
Smyrna, GA 30080

Phone: (404) 799-2100 Fax: (404) 799-2141  
Company: 8-530-2100 Fax: 8-530-2141

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY	Control No. CC- <u>27 65</u>
	Sample Delivery Group: _____

11 Page 1 of 1

Company: Georgia Power Company  
Report To: Tony Dodd  
Address: 5131 Maner Road  
Smyrna, GA 30080

Sample Shipment Date: 8

Sample Received Date: 9

Sampled By: 10

Print Name

Phone: 404 799 2142 Fax: 404 799 2144

Signature

Contact: Tony Dodd

Project Location: Plant Vought

Account Number: LAB 7600

Special Instructions: return coolers asap

\* ardodd@southernco.com

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

\* preserve and save  
voucher collection

LAB USE ONLY 13 LAB ID	Sample 14 Number	Collection 15		Sample 16 Description	Sample Type 17	Matrix 18	No. of Containers 19	ANALYSIS REQUESTED 21										Comments
		Date	Time															
	✓ 3-3	4/9/08	0920	canal / entrainment				X										
	✓ 3-6	4/9/08	0253	canal / entrainment				X										
	✓ 3-11	4/10/08	1700	source water ichthy				X										
	✓ 3-14	4/10/08	1631	" " "				X										
	✓ 3-17	4/10/08	1605	" " "				X										
	✓ 3-20	04/10/08	0356	" " "				X										
	✓ 3-23	4/10/08	0351	" " "				X										
	✓ 3-26	4/10/08	0256	" " "				X										

Relinquished by: Tony Dodd Date/Time 5/19/08 / 1100

Received by: Kristen Poyer Date/Time 5/20/08 09:30

Relinquished by: \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time \_\_\_\_\_

## LAB USE ONLY: Sample Disposition Information

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Georgia Power Environmental Laboratory  
5131 Maner Road, Bin 39110  
Smyrna, GA 30080

Phone: (404) 799-2100 Fax: (404) 799-2141  
Company: 8-530-2100 Fax: 8-530-2141

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB  
USE  
ONLY

Control No. CC- 25 66

Sample Delivery Group:

11 Page 1 of 1



12 Standard Turnaround Time



Rush in \_\_\_\_\_ Business Days

(Must be cleared through Env. Lab. prior to shipment)

Company: 1 Georgia Power Co

Report To Tony Dodd

Address: 2 5131 Maner Road

Smyrna, GA 30080

Phone: 3 404 799 2142 Fax 404 799 2141

\* Contact: 4 Tony Dodd

Project Location: 5 Plant Vogtle

Account Number: 6 LAB 7600

Special Instructions: 7 return coolers asap

\* qraddl@southernco.com

Sample Shipment Date: 8 \_\_\_\_\_

Sample Received Date: 9 \_\_\_\_\_

Sampled By: 10 \_\_\_\_\_

Print Name

Signature

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

\* preserve & save  
voucher collection

## PRESERVATIVE 20

Sample Type Key 22

G-Grab C-Composite  
O-Other

Matrix Key: 23

O-Oil SW-Surface Water  
S-Solid GW-Ground Water  
SL-Sludge WW-Waste Water  
W-Wipe DW-Drinking Water

## ANALYSIS REQUESTED 21

Preservative Key: 24

H-Hydrochloric Acid  
N-Nitric Acid  
S-Sulfuric Acid  
SH-Sodium Hydroxide  
SB-Sodium Bisulfide  
P-Phosphoric Acid  
ST-Sodium Thiosulfate  
I-Ice  
U-Unpreserved

LAB USE ONLY 25  
Comments

LAB USE ONLY 23 LAB ID	Sample 14 Number	Collection 15		Sample 16 Description	Sample Type 17	Matrix 18	No. of Containers 19										
		Date	Time														
	✓ 4-3	4/23/08	2030	Canal/Entrainment													
	✓ 4-6	4/24/08	0830	Canal/Entrainment													
	✓ 4-11	4/24/08	1607	Source water ichthyo													
	✓ 4-14	4/24/08	1539	" " "													
	✓ 4-17	4/22/08	1511	" " "													
	✓ 4-20	4/23/08	0401	" " "													
	✓ 4-23	4/23/08	0331	" " "													
	✓ 4-26	4/23/08	0302	" " "													

Relinquished by: 26 Tony Dodd Date/Time 5/19/08 / 1100 HR

Received by: 27 Kristen Rayco Date/Time 5/20/08 1015

Relinquished by: \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time \_\_\_\_\_

## LAB USE ONLY: Sample Disposition Information 28

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_

Type: \_\_\_\_\_

Date: \_\_\_\_\_

Container: \_\_\_\_\_



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**From:** Montz, Matthew Thomas  
**Sent:** Monday, May 05, 2008 2:37 PM  
**To:** Dye, Gary B.  
**Cc:** Candler, W. Jim  
**Subject:** Nautical Charts

**Attachments:** Nautical Chart 635-SC side B.pdf; Nautical Chart 634-SC side A.pdf; Nautical Chart 634-SC side B.pdf; Nautical Chart 635-SC side A.pdf

Gary,

Thanks for sending the Nautical Charts over. I have scanned them and am placing the originals back in the mail for you today. Also, attached for your files are scanned versions of the charts.



Nautical Chart  
635-SC side B.p...



Nautical Chart  
634-SC side A.p...



Nautical Chart  
634-SC side B.p...



Nautical Chart  
635-SC side A.p...

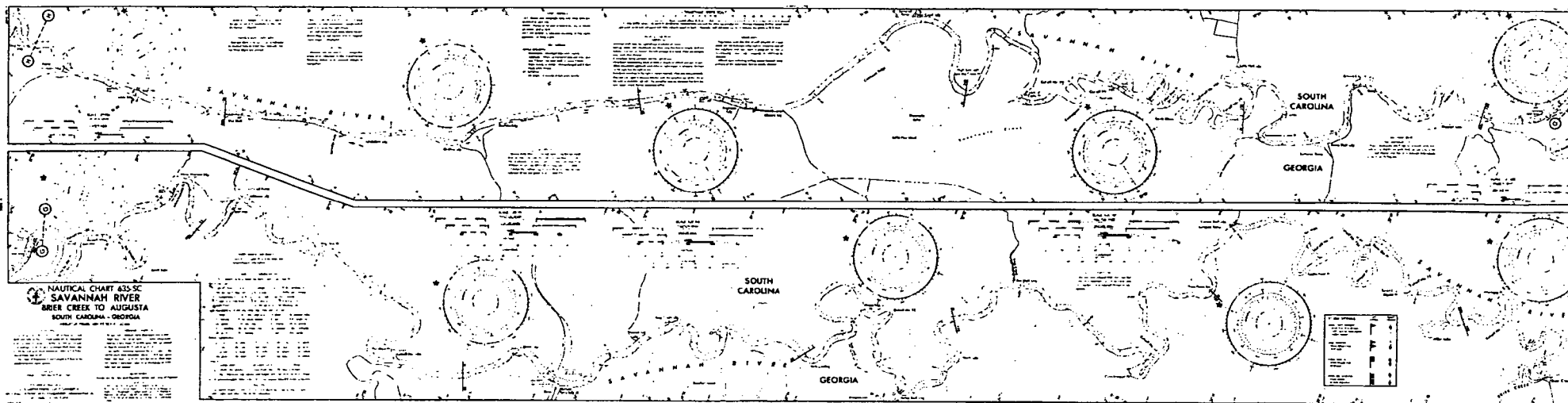
**Matthew T. Montz**

Environmental Specialist

Southern Nuclear Operating Company

Office 205-992-5629

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NAUTICAL CHART 6345C  
SAVANNAH RIVER  
SAVANNAH TO BEER CREEK  
SOUTH CAROLINA - GEORGIA

