FPL

JUN 20 2008
L-2008-140
10 CFR 50.36

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555-0001

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Wastewater Permit Number FL0001562
Request for Minor Revision Notification

In accordance with Section 3.2.3 of the Turkey Point Units 3 and 4 Environmental Protection Plan (Appendix B of Facility Operating Licenses DPR-31 and DPR-41), enclosed is a copy of the request to revise Wastewater Permit Number FL0001562.

A minor revision to the Turkey Point Wastewater Permit is requested to change the currently approved GE chemicals utilized for process water treatment in Units 1, 2 and 5 plant operations, to equivalent Nalco products. Additionally, FPL requests approval for the use of PT-7000 monoethanolamine (MEA) as an alternative to 19% Ammonia in the Unit 5 Heat Recovery Steam Generators only. Please note that the individual Material Safety Data Sheets (MSDS) for the Nalco products listed in page 1 of Attachment D of the permit revision application are not included in this transmittal.

Should there be any questions, please contact us.

Very truly yours,

for Bill Jefferson

William Jefferson, Jr.
Vice President
Turkey Point Nuclear Plant

Enclosure

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

E001
HRR

ENCLOSURE TO

L-2008-140

Florida Power & Light Company, 700 Universe Blvd., Juno Beach, FL 33408

FPL

June 20, 2008

Mr. Bala Nori, P.E.
Industrial Wastewater Section
Florida Department of Environmental Protection
2600 Blair Stone Road MS 3545
Tallahassee, FL 32399-2400

RE: Florida Power & Light Company
Turkey Point Power Plant, Dade County
NPDES Permit No. FL0001562
Minor Permit Revision Request: Chemical Vendor Change

Dear Mr. Nori:

Provided are the following items for FPL's minor revision request to the Turkey Point Plant Industrial Wastewater Permit. A minor revision is requested to allow for the replacement of chemical vendors and the associated exchange of equivalent products.

1. Three copies of DEP Form 62-620 910(9)- Wastewater Permit Minor Revision Application
2. Three copies of Attachments A: Project Summary
3. Three copies of Attachments B: Equivalent Products Letter from New Vendor
4. Three copies of Attachments C: Chemical Details Spreadsheet
5. Three copies of Attachments D: Chemical MSDS
6. FPL check payable to the Department for the $250 application fee.

FPL's Turkey Point Plant is planning to switch vendors that supply the process water treatment chemicals used in plant operations in order to reduce costs.

Your prompt attention to this request is appreciated. If you have any questions or need additional information please contact me at (561) 694-4022.

Sincerely,

Andy Flajole

Andy Flajole
Environmental Specialist
Power Generation Division

APPLICATION FOR A MINOR REVISION TO A WASTEWATER FACILITY OR ACTIVITY PERMIT

1. Instructions

a. In accordance with Rule 62-620.325, F.A.C., this form must be submitted to the appropriate Department district office or approved local program when requests for minor revisions to a permit or minor modifications to a facility are made by a permittee, except for transfer of a permit to a new permittee and addition of a major user of reclaimed water to a Part III reuse system. Application for transfer of a permit to a new permittee shall be made on DEP Form 62-620.910(11). Application for addition of a major user of reclaimed water shall be made on DEP Form 62-610.300(4)(a)1.
b. Each applicable item must be completed in full in order to avoid delay in processing of this form. Where attached sheets or other technical documentation are provided, indicate appropriate cross-references.
c. Three (3) copies of this application with supporting documentation shall be submitted with this form.
d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.
e. This application and attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Also, as applicable, this application and all attachments shall be signed and sealed by a professional engineer registered in Florida in accordance with Rule 62-620.310, F.A.C.

2. Facility Information

a. Permit Number: FL0001562 b. Facility Identification Number: FL0001562
c. Project/Facility Name: Turkey Point Power Plant
d. Contact Name: Mr. H.O. Nunez
Number and Street: 9760 S.W. 344 Street
City/State/Zip Code: Florida City, FL 33035
Telephone (305) 242-3822

3. Type of Revision

☐ **Correct Typographical Errors**[1] - Submit one copy of each page of the permit showing revisions being requested.

☐ **Change Improvement Schedule**[1] - Provide a description of the improvement, a list of the dates to be revised, and a reason for the proposed change in each date.

☐ **Change Expiration Date of Permit**[1] - Provide the current and proposed expiration dates for the permit and the reasons for the proposed change.

☐ **Change Staffing Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-699, F.A.C.

[1] A processing fee is not required.
[2] A processing fee is required with the application in accordance with Rule 62-4.050, F.A.C.

☐ **Change Monitoring and Reporting Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-601, F.A.C.

☐ **Modify Approved Pretreatment Program**[1] - Describe the proposed modification and provide the information required by Rule 62-625.540, F.A.C.

☐ **Delete Point Source Outfall**[1] - Identify the outfall and explain why the outfall is being eliminated.

☐ **Modify or Expand Approved Residuals Land Application Sites**[2] - Attach a new or updated Agricultural Use or Dedicated Site Plan as required by Chapter 62-640, F.A.C.

☒ ***Minor Modification to the Facility***[2] - Provide a description of the proposed modification. If applicable, attach any reports, plans, and specifications which have been developed to implement this modification.

☐ **Other**[2] - Provide appropriate documentation. Describe.

4. Certifications

a. Applicant or Authorized Representative

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(Signature of Applicant or Authorized Representative[3]) 6/18/2008 (Date)

Name (please type) Mr. H.O. Nunez Company Name Florida Power & Light
Title Plant General Manager Company Address: 9760 S.W. 344 Street
Phone: (305) 242-3822 City/State/Zip Code: Florida City, FL 33035

b. Professional Engineer Registered in Florida

I certify that the engineering features of this project have been (designed) (examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgement, this facility, when properly constructed, operated, and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type): Mr. Edward Preast
Florida Registration Number: 33225
Company Name: Florida Power & Light
Company Address: 700 Universe Boulevard
City/State/Zip Code: Juno Beach, FL 33408
Phone Number: (561) 691-2679

Edward Preast June 19, 2008 #33225

(Seal, Signature, Date, and Registration Number)

[3]If signed by the authorized representative, attach a letter of authorization in accordance Rule 62-620.305, F.A.C.

Florida Power & Light
Turkey Point Plant
Chemicals Minor Permit Revision

Attachment A

PROJECT SUMMARY

Florida Power & Light Company (FPL) operates the Turkey Point Plant under NPDES Permit No. FL0001562. FPL's Turkey Point Plant is planning to switch vendors that supply the process water treatment chemicals used in plant operations in order to reduce costs. FPL is submitting information on the equivalent Nalco products will replace the current GE chemicals utilized for process water treatment as authorized under the current permit. In addition, FPL requests approval for the use of monoethanolamine (MEA) as an alternative to 19% Ammonia in the Heat Recovery Steam Generators (HRSGs) only.

Attachment B is a letter from Nalco stating that the proposed products are chemical equivalents to the GE commodities in use. There are 2 exceptions where the proposed chemicals are very similar, but due to the manufacturer's proprietary formulas cannot be declared equivalent: Nalco's Elimin-Ox and 3DT-187.

Nalco's Elimin-Ox is a 6.25% carbohydrazide product that FPL proposes to use instead of GE's Cortrol OS5007, a 7% hydrazine product. According to the manufacturer, Elimin-Ox provides comparable equipment protection but is safer and more environmentally-friendly than standard hydrazine products. Nalco's 3DT-187 is a dispersant and scale inhibitor that is a blend of two proprietary components: a tagged-HSP dispersant and the scale inhibitor phosphinosuccinic oligomer. FPL proposes to use 3DT-187 instead of GE's AEC3145 and AZ8104 products in the Cooling Tower.

FPL desires to use PT-7000 (monoethanolamine) as an alternative to the commodity chemical 19% Ammonia in the Boiler Feedwater. Use of PT-7000 (MEA) will provide similar protection to our HRSGs. 19% ammonia will still be used to protect other infrastructure at Turkey Point.

Attachment C is a spreadsheet providing details such as chemical names, dosages, etc. for all of the Nalco products. Attachment D consists of the MSDS for the Nalco equivalent products and the proposed new chemical monoethanolamine (PT-7000).

James W. Boak
Key Account Manager
jboak@nalco.com

ATTACHMENT B

NALCO

January 28, 2008

Florida Power & Light Company
700 Universe Blvd
Juno Beach, FL 33408

Attention: Mary Polk, Andy Flajole

Subject: Nalco products for Turkey Point compared to GE products

Per your request, we have completed analysis of the Nalco chemical products to be used at FPL's Turkey Point plant compared to the current GE chemical Products. As shown on the attached sheet, all the Nalco chemicals are equivalent to the GE chemicals except for three. The three exceptions are as follows:

- Nalco's Elimin-Ox (6.25% carbohydrazide) replacing GE's Cortrol OS 5007 (7% hydrazine)
  - Carbohydrazide (Elimin-Ox) is a much safer and less hazardous chemical than hydrazine
  - Carbohydrazide also performs better than hydrazine in the steam cycle feedwater system passivating steel surfaces to minimize corrosion and iron/copper transport into the boiler.
- Nalco's 3DT187 replacing two GE's products, AEC3145 and AZ8104.

  3DT187 contains the following:
  - A dual function phosphonate inhibitor for both cathodic (pitting) corrosion and calcium carbonate scale inhibition. The active material is a patented, proprietary chemical called Phosphinosuccinic Oligomer (PSO).
  - Phosphoric Acid for anodic corrosion inhibition
  - A "tagged" organic High Stress Polymer (HSP) dispersant.
- Nalco's PT-7000 (monoethanolamine) replaces commodity 19% aqua ammonia as the neutralizing amine needed to elevate pH in the condensate and minimize corrosion.
  - MEA has a much lower volatility compared to ammonia and therefore is more effective in reducing corrosion in the steam cycle in areas of initial condensation.

If you have questions, please feel free to contact me at your earliest convenience.

Sincerely;

Jim Boak

Key Account Manager – FPL

Turkey Point Chemicals

Attachment C

Chemical Description	Nalco Chemical	GE Chemical	Chemical Name	Function	Equivalent Products?	Estimated Dose	Estimated Lbs/Day	Toxicity Data Mysidposis bahia (Mysid Shrimp)	Toxicity Data Menidia beryllina (Silverside)	Toxicity Data Other
Closed Cooling Water										
Molybdate	Nalco 7357	Permitted but used compound MD1406 instead	Sodium Molybdate	Closed loop mild steel corrosion inhibitor	NA	200 ppm	7.15	Exposure= 96 Hrs LC50= > 5000 ppm	Exposure= 96 Hrs LC50= >5000ppm	Rainbow Trout: Exposure= 96 Hrs LC50= 220-290 ppm
Molybdate/Tolytriazole	NALCO 8322	Corrsheild MD4106	Sodium Hydroxide Sodium Molybdate Sodium Tolyltriazole Sodium Metaborate 2-Phosphono-1,2,4-Butanetricarboxylic Acid, Sodium Salt	Closed loop mild steel & yellow metal corrosion inhibitor	Yes	0.25 oz/ gallon	2.12	No Data Available	No Data Available	Dapnia Magna: Exposure= 48 Hrs LC50= >5000 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 4434 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 1500 ppm
Tolytriazole	NALCO 1336	AZ8101	Sodium Tolyltriazole	Closed loop yellow metal corrosion inhibitor	Yes	50 ppm	1.51	Exposure= 96 Hrs LC50= 89.8 ppm	Exposure= 96 Hrs LC50= 93.2 ppm	Dapnia Magna: Exposure= 48 Hrs LC50= 420 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 23.7 ppm
Biocide (isothiazoline)	Nalco 7330	Permitted but not used	5-Chloro-2-Methyl-4-Isothiazolin-3-one 2-Methyl-4-Isothiazolin-3-one Magnesium Nitrate	Closed loop non-oxidizing biocide - isothiazoline	Yes	50 ppm	1.31	Exposure= 96 Hrs LC50= 18 ppm	Exposure= 96 Hrs LC50= >16.62 ppm	Dapnia Magna: Exposure= 48 Hrs LC50= 8.7-12 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 8 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 12.67 ppm
Steam Generator										
Liquid Tri- Sodium Phosphate	NALCO BT-3000	Optisperse HP3102	Sodium Hydroxide Sodium Tripolyphosphate	Boiler water tri-sodium phosphate - liquid	Yes	As required to maintain 0.2-2.6 ppm of phosphate	25.3	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= 3125 ppm Rainbow Trout: Exposure= 96 Hrs LC50= >5000 ppm
Powdered Tri-Sodium Phosphate	Y302105	Optisperse HP9431	Trisodium Phosphate (Sodium Phosphate, Tribasic)	Boiler water tri-sodium phosphate - powder	Yes	As required to maintain 0.2-2.6 ppm of phosphate	0.6	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= >1000 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 260 ppm
Boiler Feedwater										
Ammonia	Y302104	Commodity chemical	19% Ammonia	Condensate neutralizing amine	Yes	To maintain pH of 9.0	47.5			Daphnia Magna: Exposure= 48 Hrs LC50= 66 ppm
Monoethanolamine	PT-7000	not supplied	Monoethanolamine	Condensate neutralizing amine	NA	To maintain pH of 9.0	30.6	Exposure= 96 Hrs LC50= 250 ppm	Exposure= 96 Hrs LC50= 2500 ppm	
Hydrazine	NALCO 19H	Cortrol OS5005	7% Hydrazine	Condensate/feedwater Oxygen Scavenger	Yes	To maintain residual of 10 ppb	64.5	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= 96 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 400 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 360 ppm
Carbohydrazide	Elimin-Ox	Cortrol OS5007	6.25% Carbohydrazide	Condensate/Feedwater oxygen Scavenger	No	To maintain residual of 10 ppb	66.8	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= >1000 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 260 ppm
Cooling Tower (Turkey Point only)										
Dispersant (HSP)	Nalco 1389	AEC3145	Based on our hazard evaluation, none of the substances in this product are hazardous.	Cooling Tower dispersant polymer (HSP)	Yes	2.7 ppm	38	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= >1000 ppm Rainbow Trout: Exposure= 96 Hrs LC50= >1000 ppm
Scale inhibitor (HEDP)	Nalco 1393	AZ8104	Hydroxyethylidenediphosphonic Acid Phosphonic Acid	Cooling Tower calcium carbonate scale inhibitor (HEDP)	Yes	1 ppm	14	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= 527 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 1000 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 368 ppm
Dispersant & Scale inhibitor (HSP)	Nalco 3DT-187	AEC3145 + AZ8104	Phosphoric Acid	Cooling Tower dispersant & scale inhibitor	No	19 ppm	272.4	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= 1042 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 1875 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 2422 ppm
Corrosion Inhibitor	Nalco 73286	OP8413	Orthophosphate	Cooling Tower corrosion inhibitor (orthophosphate)	Yes	4.2 ppm	56.8	No Data Available	No Data Available	
Non-oxidizing Biocide (isothiazoline)	Nalco 7330	CT1300	5-Chloro-2-Methyl-4-Isothiazolin-3-one 2-Methyl-4-Isothiazolin-3-one Magnesium Nitrate	Cooling Tower non-oxidizing biocide (isothiazoline)	Yes	As needed	11	Exposure= 96 Hrs LC50= 18 ppm	Exposure= 96 Hrs LC50= >16.62 ppm	Daphnia Magna: Exposure= 48 Hrs LC50= 8.7-12 ppm Fathead Minnow: Exposure= 96 Hrs LC50= 8 ppm Rainbow Trout: Exposure= 96 Hrs LC50= 12.67 ppm
Foam Control (silicon based)	Nalco 7468	Foamtrol AF2290	Amorphous Silica	Cooling Tower foam control	Yes	As needed	50	No Data Available	No Data Available	Daphnia Magna: Exposure= 48 Hrs LC50= 1000 ppm Fathead Minnow: Exposure= 96 Hrs LC50= >1000 ppm Rainbow Trout: Exposure= 96 Hrs LC50= >1000 ppm

Florida Power & Light Company, Street Address, City, State Zip
123-456-7890

Attachment D

Florida Power & Light
Turkey Point Plant
Chemicals Minor Permit Revision

MSDS

The following Nalco products' MSDS are included for FDEP's review:

1.	7357	Molybdate
2.	8322	Molybdate/Tolytriazole
3.	1336	Tolytriazole
4.	7330	Isothiazoline
5.	BT-3000	Tri-Sodium Phosphate (Liquid)
6.	Y302104	Tri-Sodium Phosphate (Powder)
7.	Y302104	Ammonia (Aqueous)
8.	PT-7000	Monethanolamine
9.	19H	Hydrazine
10.	Elimin-Ox	Carbohydrazide
11.	1389	Dispersant (HSP)
12.	1393	Scale Inhibitor (HEDP)
13.	3DT-187	Dispersant and Scale Inhibitor (HSP)
14.	73286	Corrosion Inhibitor
15.	7468	Foam Control- Silicon Based