

**HARDEE POWER
PARTNERS LIMITED**

Invenergy

September 19, 2013

Via Electronic Mail

Ms. Mauryn McDonald, P.E.
Water Facilities Administrator
Florida Dept. of Environmental Protection, Southwest District
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Re: Hardee Power Partners Limited
Hardee Power Station
NPDES No. FL0041751
Conditions of Certification No. PA 89-25E
Ground Water Monitoring Plan Revision

Dear Mauryn:

The Hardee Power Station's (HPS') original Ground Water Monitoring Plan (GWMP), submitted to the former FDER in May 1991, identified its stormwater detention pond's monitoring wells (wells HPS-5 and HPS-6) as Zone of Discharge (ZOD) compliance wells. However, HPS' above-referenced Conditions of Certification indicates that the ZOD is related to the facility's cooling reservoir only, and therefore, should not be associated with the stormwater detention pond's monitoring wells HPS-5 or HPS-6. Similarly, neither of these wells should be classified as background or compliance wells associated with the ZOD within the FDEP's database, and instead should be designated as "Report Only."

In an effort to harmonize the designations of HPS' ground water monitoring wells in the facility's Conditions of Certification, GWMP, and within the FDEP's database, Hardee Power Partners hereby submits a revised GWMP for the HPS facility. The attached revisions reflect the proper classification of wells HPS-5 and HPS-6, and also correct the misidentification of these wells in Section 2.1 of the plan. Included in this submittal are the two revised pages, with edits reflected using "track changes", along with a complete pdf copy of the GWMP, which includes the two revised pages.

We appreciate your assistance with this matter. If you have any questions regarding this information, please contact Matt Drennan at (863) 375-3266, ext. 227.

Sincerely,



Tim Frost
Plant Manager

Cc: Cindy Mulkey, FDEP – Tallahassee
Ilia Balcom – FDEP – Tampa
Matt Drennan – HPS
Frank Sarduy – Southshore Environmental

2.0 GROUNDWATER MONITORING PROGRAM

The conditions of certification (PA 89-25) prepared for the HPS require the monitoring of groundwater quality horizontally and vertically through the aquifer above the Hawthorn Formation. The proposed groundwater monitoring program presented in this section has been developed based on interpretation of the extensive data base collected at the site as included in the Site Certification Application/Environmental Assessment document prepared for the HPS. This groundwater monitoring program has been prepared to provide the information stipulated in appropriate sections of Chapter 17-28.700(6)(d), FAC, as discussed during the pre-application meeting conducted with representatives of the Southwest District Office of the FDER.

2.1 MONITORING WELL LOCATION AND SITING RATIONALE

The two facilities at the HPS that discharge to groundwater and require groundwater monitoring are the cooling reservoir and the stormwater detention (sedimentation) pond. Due to the orientation of the facilities and the relation between the direction of groundwater flow and the site boundaries, these two facilities can be considered as separate areas.

Chapter 17-28.700(6)(g), FAC, indicates that monitoring wells should be typically located in the following orientation: upgradient area representative of background conditions; downgradient area at the edge of the zone of discharge; and downgradient area within the zone of discharge. The proximity of the cooling reservoir and the stormwater detention pond to the floodplain of Payne Creek and the property boundary precludes the installation of two intermediate wells in the downgradient direction. It is therefore proposed that monitoring downgradient from ~~these two areas~~ the cooling reservoir be accomplished at the edge of the zone of discharge and that monitoring for the stormwater detention pond be performed in a single downgradient area.

The direction of groundwater flow in the surficial aquifer has been established to be toward the southwest (Figure 1.2-2). Areas to the northeast of the cooling reservoir and stormwater detention pond are representative of upgradient conditions; areas to the southwest of the cooling reservoir and stormwater detention pond are representative of downgradient conditions. Monitoring well locations have been selected as follows:

Cooling Reservoir

- Upgradient--An area near the northeast corner of the property has been selected to monitor groundwater quality unaffected by the operation of the cooling reservoir (Well HPS-1).
- Downgradient--Two areas have been selected along the western boundary of the cooling reservoir to monitor the zone of discharge to groundwater (Wells HPS-2 through HPS-4). These wells will monitor both the upper and lower zones of the surficial aquifer.

Stormwater Detention Pond

- Upgradient--An area northeast of this pond has been selected to monitor groundwater quality unaffected by its operation (Well HPS-54).
- Downgradient--An area to the southwest of this pond has been selected to monitor ~~the zone of discharge to groundwater~~ downgradient of the stormwater detention pond (Well HPS-65).

Locations of the proposed monitoring wells are presented in Figure 2.1-1. The rationale for selection of monitoring well locations is summarized in Table 2.1-1.

2.2 MONITORING WELL DEPTHS

Five shallow monitoring wells are planned to be constructed in a similar configuration, and are intended to penetrate approximately 10 feet below the top of the surficial aquifer. Depths of the shallow monitoring wells are anticipated to be 15 feet below land surface. The wells will be constructed with 2-inch diameter, flush threaded, PVC slotted screen and riser pipe. Ten-foot lengths of slotted screen will be used with sufficient riser pipe to intercept the upper 10 feet of the surficial aquifer.

One deep monitoring well is also planned to be installed at the site in an area downgradient from the cooling reservoir. This well is intended to monitor groundwater quality and water levels at a depth within the surficial aquifer and allow comparison of data with the adjacent shallow monitoring well. The deep monitoring well is anticipated to be completed to a depth of 30 feet below land surface. This well will also be constructed with 2-inch diameter, flush threaded, PVC slotted screen and riser pipe. A 10-foot length of slotted screen will be used in the deep monitoring well with sufficient riser pipe to monitor the interval approximately 20 to 30 feet below land surface.

Hayden, Robert

From: McDonald, Mauryn <Mauryn.McDonald@dep.state.fl.us>
Sent: Tuesday, February 18, 2014 10:48 AM
To: Drennan, Matt
Cc: Frank Sarduy; Frost, Tim; Johnson, Sheldron
Subject: RE: Revised HPS GWMP

Good morning Matt,

I'm just waiting on confirmation that the eDMR records have been updated. I will inform you once that is done, so that the Plant Manager can submit results. The ID for MWC-6 will be changed to MWD-6 and the limits will be changed to "report only". The reporting requirements for MWB-5 will not change, since it was already "report only".

Thank you,
Mauryn
Mauryn McDonald, P.E.
Water Facilities Administrator
Southwest District
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Mauryn.McDonald@dep.state.fl.us
Telephone: 813.470.5730
Fax: 813.470-5995

From: Drennan, Matt [mailto:MDrennan@invenergyllc.com]
Sent: Tuesday, February 18, 2014 7:39 AM
To: McDonald, Mauryn
Cc: Frank Sarduy; Frost, Tim; Johnson, Sheldron
Subject: RE: Revised HPS GWMP

Good morning,

We have not submitted the ground water results from Jan. They are entered into the system and our Plant Manager only needs to hit the submit button. He was going to do that this morning. Should we hold off?

Thanks Mauryn,

Matt Drennan | Plant Manager
Invenergy Services | Nelson Energy Center | 1311 Nelson Rd., Rock Falls, IL 61071
mdrennan@Invenergyllc.com | office 815-310-3578 | cell 863-327-2013

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From: McDonald, Mauryn [<mailto:Mauryn.McDonald@dep.state.fl.us>]
Sent: Monday, February 17, 2014 3:43 PM
To: Drennan, Matt
Cc: Frank Sarduy; Frost, Tim; Johnson, Sheldron
Subject: RE: Revised HPS GWMP

Hello Matt,

I sincerely apologize for the delay. I left a voicemail message for you earlier today – wells HPS-5 and HPS-6 will be designated as report-only monitoring wells. The siting office and the facility's compliance manager are aware of the update. I'm in the process of updating our records and will provide that information to the eDMR department, so that the eDMR records can be similarly updated. Has the DMR for January already been submitted?

Thank you,
Mauryn
Mauryn McDonald, P.E.
Water Facilities Administrator
Southwest District
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Mauryn.McDonald@dep.state.fl.us
Telephone: 813.470.5730
Fax: 813.470-5995

From: Drennan, Matt [<mailto:MDrennan@invenergyllc.com>]
Sent: Friday, February 14, 2014 2:42 PM
To: McDonald, Mauryn
Cc: Frank Sarduy; Frost, Tim; Johnson, Sheldron
Subject: RE: Revised HPS GWMP

Mauryn,

Has there been any progress on this request?

Thanks,

Matt Drennan | Plant Manager
Invenergy Services | Nelson Energy Center | 1311 Nelson Rd., Rock Falls, IL 61071
mdrennan@Invenergyllc.com | office 815-310-3578 | cell 863-327-2013

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From: McDonald, Mauryn [<mailto:Mauryn.McDonald@dep.state.fl.us>]
Sent: Monday, September 23, 2013 3:32 PM
To: Drennan, Matt

Cc: Mulkey, Cindy; Balcom, Ilia; Frank Sarduy; Frost, Tim

Subject: RE: Revised HPS GWMP

Matt, thank you for your submittal. I will let you know if I have questions.

Sincerely,

Mauryn

Mauryn McDonald, P.E.

Water Facilities Administrator

Florida Dept. of Environmental Protection, Southwest District

13051 North Telecom Parkway

Temple Terrace, FL 33637-0926

Telephone: 813.470.5730

Fax: 813.470-5995

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: Drennan, Matt [<mailto:MDrennan@invenergylc.com>]

Sent: Monday, September 23, 2013 2:16 PM

To: McDonald, Mauryn

Cc: Mulkey, Cindy; Balcom, Ilia; Drennan, Matt; Frank Sarduy; Frost, Tim

Subject: Revised HPS GWMP

Good afternoon Mauryn,

Please see attached files concerning HPS submission to revise our Ground Water Monitoring Plan.

Please call or email if you have any questions.

Best Regards,

Matt Drennan | Operations Superintendent

Invenergy Services | Hardee Power Station | 6695 CR 663 N Bowling Green, FL 33834

mdrennan@invenergylc.com | 863-375-3266 ext 227

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