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**PROJECT MEMORANDUM  
KIRBY HILLS NATURAL GAS STORAGE FACILITY PROJECT, PHASE 2**

**To:** Junaid Rahman, CPUC  
**From:** Vida Strong, Aspen Project Manager  
**Date:** November 7, 2008  
**Subject:** Report #18: October 12, 2008 – November 1, 2008

**CPUC ENVIRONMENTAL MONITOR (EM):** Jody Fessler

CPUC EM Jody Fessler was on site Friday, October 17<sup>th</sup> and Wednesday, October 29<sup>th</sup>.

**WELL SITES:**

**Summary of Activity:**

**Well Site 21 (WS-21)**

October 12<sup>th</sup> – October 18<sup>th</sup>

Monday through Wednesday, the workover rig installed gravel pack and screens at WS-21-5. On Wednesday, the workover rig broke down and was disassembled on Thursday. No work was conducted on Friday (see Figure 1).

October 19<sup>th</sup> – October 25<sup>th</sup>

No work activities occurred at WS-21 throughout the subject week.

October 26<sup>th</sup> – November 1<sup>st</sup>

On Monday, crews began excavation for pipe support foundations at WS-21. On Tuesday and Wednesday, crews worked on form and rebar work for the pipe supports and began fabricating piping spools for wellsite piping. On Thursday, crews poured concrete for pipe support spread footings, continued piping fabrication, and began excavation for piping installation.

**Well Site 22 (WS-22)**

October 12<sup>th</sup> – October 18<sup>th</sup>

On Monday, crews continued fabrication and installation of the fourth wellhead piping system. They also removed start-up strainers on three wellheads, cleaned debris, and re-installed. On Tuesday, crews completed preparation for hydrostatic testing on the fourth wellhead piping system and pressured up to 2200 psi for stabilization and leak check. Crews also removed strainers from the three wellhead piping system and began installation of the 2-inch piping. On Wednesday, crews successfully hydrottested the fourth wellhead piping system. On Thursday, crews de-watered the piping system for the fourth wellhead and completed the installation of the fourth wellhead piping system. On Friday, crews coated underground field joints and fittings in the trench (see Figure 2).

October 19<sup>th</sup> – October 25<sup>th</sup>

On Tuesday, crews began backfill of the piping trenches and continued this activity on Wednesday. On Thursday, crews completed backfill of the piping between the meter area and the wellheads. Crews also moved the piping material for WS-21 from the compressor station for temporary storage at WS-22. On Friday, crews continued moving the piping material for WS-21 to WS-22.

October 26<sup>th</sup> – November 1<sup>st</sup>

Monday through Wednesday, crews worked on rebar and formwork for the pipe support foundations. On Thursday, crews poured concrete for the pipe support spread footings.



**Well Site 23 (WS-23)**

October 12<sup>th</sup> – October 18<sup>th</sup>

Monday through Wednesday, Ensign Drilling continued to drill at WS-23-15. Drilling operations are being conducted 7 days a week, 24 hours a day. On Thursday, crews prepared to move the drill rig from WS-23-15 to WS-23-14. On Friday, the drill rig was moved and drilling operations began at WS-23-14. Drilling continued for the rest of the week at WS-23-14.

October 19<sup>th</sup> – October 25<sup>th</sup>

Throughout the week, Ensign Drilling continued drilling operations at WS-23-14. Drilling operations are being conducted 7 days a week, 24 hours a day.

October 26<sup>th</sup> – November 1<sup>st</sup>

Throughout the week, Ensign Drilling continued drilling operations at WS-23-14 (see Figure 3). Drilling operations are being conducted 7 days a week, 24 hours a day.

**Observation Well Lambie 6 (Well L6)**

No work activities occurred at Well L6 during the subject week.

**Observation Well Lambie 7 (Well L7)**

No work activities occurred at Well L7 during the subject week.

**PIPELINE:****Summary of Activity:**

No work activities occurred on the pipeline during the weeks of October 12<sup>th</sup> -18<sup>th</sup> and October 19<sup>th</sup> - 25<sup>th</sup>.

October 26<sup>th</sup> – November 1<sup>st</sup>

On Thursday, crews seeded the pipeline right-of-way from the compressor station to WS-22 (see Figure 4).

**ACCESS ROADS:****Summary of Activity:**

No work activities occurred on the access roads during the subject weeks. The access roads are being used by construction vehicles and equipment to access the construction sites.

**STAGING AREAS:****Summary of Activity:**

Crews are utilizing the temporary work area/staging yard on the north side of the compressor station for materials storage, equipment storage, welding operations, and pipe fabrication.

**COMPRESSOR STATION SITE:****Summary of Activity:**

October 12<sup>th</sup> – October 18<sup>th</sup>

Throughout the week, crews removed the existing pig receiver KAQ-9300 and installed the new piping tie-in pieces, conducted excavation for HAL-3005/3006 gas cooler foundation, installed underground main gas piping in the trenches, backfilled for fuel gas heater and conditioning skids, coated underground field joints and fittings in the pipe trenches, continued installation of underground piping in trenches, installed miscellaneous above grade pipes and valves, fabricated miscellaneous pipe spools, poured concrete for

the glycol regeneration skid foundation, completed re-compaction of subgrade for the gas cooler foundations, poured concrete for HAL-3005/3006 gas cooler foundation footings, and stripped forms for glycol regeneration skid foundation.

October 19<sup>th</sup> – October 25<sup>th</sup>

Throughout the week, crews conducted final formwork for HAL-3005/3006 gas cooler support piers, poured concrete for HAL-3005/3006 gas cooler support piers, installed underground main gas piping in trenches, continued installation of underground piping in trenches, continued installation of miscellaneous above grade piping, continued fabrication of miscellaneous pipe spools, backfilled miscellaneous piping, stripped forms for gas cooler support piers, excavated for utility piping near the glycol regeneration skid, began excavation for piping near storage tank pump area, began excavation for piping south of the new compressor building, and coated underground field joints and fittings.

October 26<sup>th</sup> – November 1<sup>st</sup>

Throughout the week, crews continued excavation for piping headers near the new compressor building area, installed underground main gas piping and other piping in the trenches, fabricated miscellaneous pipe spools, offloaded the large gas cooler from trailer in the area north of the new compressor building (will set on the new foundations once drawings are approved, permits issued, and concrete poured), and set the small cooler on foundation piers (see Figure 5).

#### **Environmental Compliance:**

The CPUC EM observed that all work activities were in compliance with the approved Mitigated Negative Declaration and other permit requirements. The CPUC EM reviewed LGS' Environmental Inspector's (EI) daily reports and survey reports. Environmental training of crew personnel by LGS's EI was on-going as new crew personnel came onto the site. Sensitive environmental areas were staked, flagged, and/or fenced. The wetland area near WS-23 was fenced off and had silt fencing installed on the upslope side so potential erosion from WS-23 would not enter the wetland area. The CPUC EM observed water trucks continuously watering the work areas and access roads. The refueling tank and other small cans at the compressor station were surrounded with secondary containment. The sites were cleaned of trash on a daily basis. Erosion controls were in place in preparation for precipitation events.

#### **NOTICES TO PROCEED (NTP):**

To date, six Notices to Proceed (NTPs) have been issued for the Kirby Hills Natural Gas Storage Facility Phase II Project (see Table 1). Additional NTPs are anticipated for the project.

**TABLE 1**  
**Notice to Proceed Requests**  
(Updated 11-07-08)

NTP #	Date Requested	Date Issued	Description
#1	4-11-08	4-21-08	Request authorization from the CPUC to commence with construction activities associated with three new wells (Well Sites 21, 22, and 23), a 2,700-foot-long pipeline (flow line), and access roads and staging areas for Phase II of the Kirby Hills Natural Gas Storage Facility Project.
#2	4-11-08	4-20-08	Request authorization from the CPUC to commence with reentry and conversion of Wells Lambie 6 and Lambie 7 to observation wells for Phase II of the Kirby Hills Natural Gas Storage Facility Project.
#3	5-2-08	5-6-08	Request a NTP from the CPUC for PG&E's hot tapping work at the Kirby Hills Natural Gas Storage Facility meter station, located west of Birds Landing Road in Solano County.
#4	4-29-08	5-7-08	Request authorization from the CPUC to commence with the civil, mechanical, electrical, and instrumentation work at the compressor station facility of the Kirby Hills for Phase II of the Kirby Hills Natural Gas Storage Facility Project.
#5	5-23-08	N/A	Request authorization from the CPUC for extra work space at the corner of Shiloh Road and the access road to Kirby Hills. This work space was already approved under NTP #1 and therefore NTP #5 is not necessary. Wetland areas within the work space will be totally avoided.
#6	6-9-08	6-13-08	Request to install compressor units on foundations at Compressor Station.

**VARIANCE REQUESTS:**

No Variance Requests have been submitted to the CPUC to date.

# PHOTOGRAPHS



**Figure 1** – Well site 21 (WS-21), October 17, 2008.



**Figure 2** – Well heads at WS-22, October 17, 2008.



**Figure 3** – Ensign Drilling at WS-23-14, October 29, 2008.



**Figure 4** – Pipeline right-of-way from Compressor Station to well sites, October 29, 2008.



**Figure 5** – Crews working at Compressor Station, October 29, 2008.