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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: December 11, 2008

Subject: Report #20: November 9, 2008 – December 6, 2008

CPUC ENVIRONMENTAL MONITOR (EM): Jody Fessler

CPUC EM Jody Fessler was on site Friday, November 21st.

WELL SITES:

Summary of Activity:

Well Site 21 (WS-21)

Week of November 9th - November 15th

Throughout the week, crews fabricated and installed wellsite piping, coated underground pipe and fittings, conducted piping system assembly, began backfilling trenches, completed form work for pipe support piers, set up workover rig on WS-21-5, pouted concrete for pipe support piers. Also, the workover rig was set up at WS-21-5 on Thursday and work was completed on Saturday.

Week of November 16th - November 22nd

Throughout the week, crews stripped the pipe support forms, fabricated the 2-inch wellhead piping, moved workover equipment from WS-21 to WS-23, prepared for hydrostatic testing, conducted hydrostatic testing of WS-21 piping, de-watered piping and connected to 2 wellheads (see Figure 1).

Week of November 23rd – 29th (Crews took off work Thursday, Friday and Saturday for Thanksgiving.) In the beginning of the week, crews completed piping tie-in and installation to wellheads, cleaned up the area, installed remote measuring equipment to wellsite piping, and began gas injection into WS-21-4 and WS-21-5.

Week of November 30th - December 6th

No construction activities took place at WS-21 during the subject week.

Well Site 22 (WS-22)

Week of November 9th - November 15th

Throughout the week, crews conducted formwork for the pipe support piers, installed forms for the pipe support piers, and poured concrete for the pipe support piers.

Week of November 16th - November 22nd

Throughout the week, crews stripped pipe support forms, dug across the access road and installed pipeline, HDPE and cable (see Figure 2).

Week of November $23^{rd} - 29^{th}$ (Crews took off work Thursday, Friday and Saturday for Thanksgiving.) No construction activities took place at WS-22 during the subject week.

Week of November 30th - December 6th

No construction activities took place at WS-22 during the subject week.

Well Site 23 (WS-23)

Week of November 9th - November 15th

Throughout the week, Ensign Drilling continued demobilizing drill rig from WS-23.

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Week of November 16th - November 22nd

Throughout the week, crews welded pipeline at WS-23, set up workover rig and prepared for frac (see Figure 3).

Week of November 23rd – 29th (Crews took off work Thursday, Friday and Saturday for Thanksgiving.) In the beginning of the week, crews installed trench breakers in the pipeline trench on the slope, continued to backfill pipeline trench, conducted fracs at WS23-14 and WS-23-15, and demobilized frac equipment.

Week of November 30th - December 6th

Throughout the week, a workover rig was at WS-23-14.

Observation Well Lambie 6 (Well L6)

On Tuesday, November 25th, Asta Construction installed a 20-foot-square pad and began fence installation around the well site.

Observation Well Lambie 7 (Well L7)

On Tuesday, November 25th, Asta Construction installed a 20-foot-square pad and began fence installation around the well site.

PIPELINE:

Summary of Activity:

Week of November 9th - November 15th

On Tuesday, a survey crew re-identified the pipeline centerline from WS-22 to the pig launcher at WS-23. On Thursday, crews began removing topsoil between WS-22 and WS-23. On Friday, crews excavated for the pipeline between WS-22 and WS-23, conducted pipe welding, and installed the HDPE pipe section in the trench. On Saturday, crews conducted pipe welding and lowered in a 278-foot section of pipeline.

Week of November 16th – November 22nd

Throughout the week, crews excavated between WS-22 and WS-23, installed pipe in the trench, conducted welding of pipeline between WS-22 and WS-23, installed HDPE and cable in pipeline trench, backfilled access road near WS-22, and began backfilling trench between WS-22 and WS-23 (see Figure 4).

Week of November 23rd – 29th (Crews took off work Thursday, Friday and Saturday for Thanksgiving.) In the beginning of the week, crews continued backfilling the pipeline trench between WS-22 and WS-23.

Week of November 30th - December 6th

No construction activities took place on the pipeline during the subject week.

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:

Week of November 9th - November 15th

Throughout the week, crews began backfilling underground piping, continued installation of miscellaneous piping, continued fabrication of miscellaneous piping spools, set inlet filter separator (MAK-6150), and conducted formwork for the fuel gas heater foundation.

Week of November 16th - November 22nd

Throughout the week, crews conducted welding activities and pipe fabrication, installed piping at the inlet filter separator (MAK-6150), fabricated miscellaneous pipe spool, and constructed formwork for fuel gas filter and heater foundations.

$\textit{Week of November } 23^{rd}$ - $\textit{November } 29^{th}$ (Crews took off work Thursday, Friday and Saturday for Thanksgiving.)

In the beginning of the week, crews completed form and rebar work for the fuel gas heater foundation and fuel gas filter skid foundation, fabricated piping for MAD-6250 filter separator, poured cement for fuel gas heater foundation and fuel gas filter skid foundation, tested and repaired underground pipe coating in the trenches, repaired damaged grounding grid that was damaged during excavation, installed miscellaneous piping and valves, and cleaned up the site.

Week of November 30th - December 6th

Throughout the week, crews moved their welding fabrication area from the temporary workspace to inside the compressor station fencing. Crews also continued to backfill and compact pipe trenches, received and spread rock inside the fenced area, installed miscellaneous HDPE air piping, conducted miscellaneous pipe fabrication, and received equipment.

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. Erosion controls were in place and functioning at all work sites. 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.

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 12-11-08)

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 – Crews conducting hydrostatic testing at well site 21 (WS-21), November 21, 2008.



Figure 2 – Well-head piping at well site 22 (WS-22), November 21, 2008.



Figure 3 – Workover rig at well site 23 (WS-23), November 21, 2008.



Figure 4 – Excavating pipeline trench on downhill slope of well site 23 (WS-23), November 21, 2008.