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**From:**  
**Sent:** 03 May 2017 15:33  
**To:**  
**Cc:**  
**Subject:** HSE - Cuadrilla - LJ/6-PNA - Preston New Road 1/1Z - Notification Clarifications

I'm currently reviewing the Notification of "Intent to Drill Preston New Road 1 & 1Z on LJ/06" and have the following clarifications which require a response;

- 1) Notification requires a signed off front cover sheet.
- 2) No latitude/ longitude information provided.
- 3) No target latitude/ longitude information for horizontal section provided.
- 4) Cuttings augers are to be used – provide information regarding the protection measures and emergency stop measures.
- 5) Cellar construction and access/egress – please provide final layout of site as included in Site Safety Document.
- 6) Please provide information as to the provisions for emergency response/ rescue from cellar.
- 7) Please provide a copy of the Site Safety Document.
- 8) Please comment on relevant Standards used during the design process and manufacturing process for equipment and operations i.e: API or other International Standards.
- 9) Wellhead Stack Up (Table 2) Wellhead Assembly – 21-1/4" 2k bottom x 13-3/8" 10k top? Please clarify if this is correct?
- 10) Programme of Works (Table 8) is missing installation of diverter?
- 11) Please confirm the logs to be run on each hole section.
- 12) Casing Plan (Table 11) –there is no grade provided for 4-1/2" 13.5lb/ft?
- 13) Confirmation of top of 4-1/2" liner if this design is used?
- 14) Cement used for the different hole sections should stipulate compliance with API including lead and tail slurries, weights, cementing contractor QA/QC?
- 15) Casing Centralization – comment should be made with respect to this to ensure good cement placement. Provide details of drag calculations with conducted with respect to centralization (placement and numbers of centralizers).
- 16) CBL/VDL planned – when will these be conducted?
- 17) 4-1/2" production/frac string (Table 13) – cemented back to what depth?

- 18) Please provide details of abandonment plug/ placement/ length –Note: this may require material change when depths are known. Please provide diagram showing intended abandonment of pilot hole.
- 19) There is no mention that the Well Control equipment (Annular BOP, Rams, etc) are built to API standards. Please confirm that this is the case and the Well Control equipment is monogrammed as such.
- 20) Please provide information as to the shear capability of the shear rams – what pipe can/ can't be sheared – provide details of any verification performed?
- 21) Please provide details of choke manifold, mud gas separator and koomey unit?
- 22) Is there an actuated valve on the diverter line that is interlocked with the diverter/ 21-1/4" annular?
- 23) Attachment 2. B. Wellhead/BOP stack-up which shows B-Section at GL – Program states that wellhead/tree will be below GL – please clarify?
- 24) Provide Barrier table stipulating Primary and Secondary well barriers during the construction process.
- 25) Section 4.2 – geomechanical study – has this been completed and if so, have there been any changes based on the results with respect to mud weight selection from borehole stability/ frac gradient analysis?
- 26) Please provide the rationale for utilizing 10.2ppg MW in the 26" and 16" hole sections. Provide details of contingencies in place, water availability / mud mixing capability for 10.2ppg MW.
- 27) Please provide the initial full abandonment plan based on the specifically designed casing programme for the final abandonment of the well.
- 28) Provide details of planned coring intervals as they are currently known, how many coring intervals are planned and the type of coring system to be used.
- 29) Provide details of the well control arrangements to be in place during coring operations.
- 30) Please provide details of core handling procedures at surface for safe handling.
- 31) Table 3: 13-3/8" casing – BOP pressure test prior to 9-5/8" casing. Please provide details of the components to be tested upon installation.
- 32) Please provide flow diagrams or similar to describe the contingent operations available such as running the 4-1/2" liner and the scenarios under which those contingent operations would take place.
- 33) With two wells situated in the cellar – please provide information regarding the protection devices to be installed to inhibit the impingement of one well on another.
- 34) Please provide a copy of the risk assessment for the planned operations on PNR 1/1Z.
- 35) Confirmation that Well Examiner has reviewed the programme and that any concerns/issues have been resolved.

Please feel free to contact me if you wish to discuss these clarifications further.

Kind Regards,

**| HM Inspector of Health and Safety | Well Engineering & Operations | Energy Division - Offshore**  
**Health & Safety Executive | HID Energy Division, ED 6, Lord Cullen House, Fraser Place, Aberdeen, AB25 3UB |**  
**☎ : Direct Line      ☎ : Mobile      ✉ :      [Please note**  
**updated Direct Line and email address]**

