

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SMT
KISHENDRIYA W/o SHRI SHOBENDRA SINGH FOR THE CONSTRUCTION OF
OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH)
VILLAGE NAITWAD, TEHSIL- MORI- DISTRICT UTTARKASHI,
UTTARAKHAND
KHASARA No. – 206(b) & AREA – 0.053 ha.**

Date of Inspection: 04/02/14

In a 'World Bank' funded programme, Government of Uttarakhand has provided teams of Consultant Geologists and Consultant Associate Geologists to Director, Geology and Mining Unit, Uttarakhand for geological studies in proposed sites for Owner Driven Construction For Housing (ODCH) in disaster affected districts of Uttarakhand.

Director, Geology and Mining Unit, Directorate of Industries, Uttarakhand has issued an Office Order No.1612 Aa. Pra./Bhu.Ni./Bhu.Khani.E./2013-14 dated 10thDecember 2013 regarding geological studies in disaster affected five districts of Uttarakhand, Uttarkashi is one of them. Thus, undersigned have taken geological observation during traverses and collected field geological data under the management of cosignatory departmental 'Assistant Geologist'.

In the above mentioned questioned area, the reconnaissance geological investigation was carried out in the presence and co-operation of Shri Raj kumar Pandey, S.D.M., Purola, Uttarkashi. It is 14Km approx from Tehsil Headquarter Mori, Uttarkashi, Uttarakhand and the site is at 2Km milestone on Naitwad-Sewa motar marg. It falls on coordinate – N 31° 04'08.2" E 78° 06'02.7" El. 1287m. The site is in village Naitwad, which is densely populated, on the right bank of Supin river which is flowing NE to SW in direction. Some new houses are developed in the last 5 years around the proposed site.

The proposed site is on mix colluvial overburden material varying in thickness range from >5m approx at places, man-made cultivated terraces are present. The uphill slope is 50°-55° and the downhill slope is 10°-15° sloping in N 165° direction. Around the proposed site location dense pine vegetation is present at about 150m approx in uphill side.



Close view of the proposed site



Uphill side view from the proposed site

The proposed site is on colluvial overburden material thus no insitu rock is found but a few boulders varying in size range from 0.5m to 2m approx are found embedded in the greyish black sandy soil with fragments of quartz and gneiss of 0.5cm-2cm approx size. The soil is consolidated; the rate of infiltration is medium in the NW back side making the soil

water saturation medium. At the proposed site location the water seepage is low. The electric poles and trees at the uphill slopes are standing straight.

RECOMMENDATIONS:

1. Inclined retaining wall of 2m approx height and 4m to 5m approx length at the NW backside boundary and also in the SE toe boundary of the site with depth of foundation of the backside retaining more than that of the foundation depth of the house, with provisions of weep holes and sufficient gap of about 2-3feet in between the backside retaining wall and the proposed construction should be constructed. And also, proper drainage system between the retaining wall and the wall of house should be developed.
2. The surface drainage should be properly planned through lined drain/pipe, so both rain water as well as waste water from the existing houses to be release safe place in NE direction along a channel.
3. The foundation depth of the houses must be as per the compactness of the overburden material at the proposed site.
4. Framed structure with deep column and light roof must be constructed as the area falls in the earthquake zone IV, so it is essential that the house must be constructed with latest earthquake resistive techniques.
5. Massive plantation of trees, bushes and grasses which can hold the soil mass and retain the debris with dense and long rooted, wide leafed flora must be done in the NW uphill side to protect the soil erosion and minimize the surface erosion of sub-surface rock.
6. The soak pits and toilet foundations must be quiet away in SW side from the house so that the foundations are not directly affected from subsidence due to excessive seepage.
7. The premises of house must be made 'pukka' in order to avoid excessive seepage of the surface water.

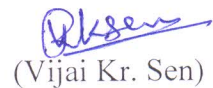
CONCLUSION:

Prima-facie, presently, the proposed site of Smt. Kishendiyra W/o Shri Sobendra Singh is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in their contravention; geologically suitability will be deemed annulled.



(Shashank Sharma)

Consultant Associate Geologist

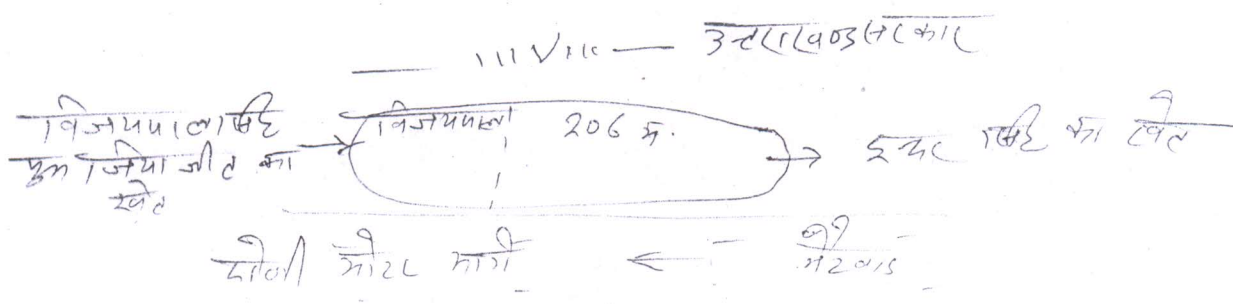
Place: Camp Uttarkashi


(Vijai Kr. Sen)

Consultant Geologist

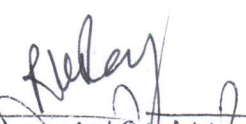

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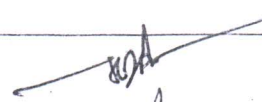
तहसील मोरी के ग्राम ^{नैरवास} में माह जून 2013 कीद्वी आपदा में पूर्णरूप से क्षतिग्रस्त भवन के कारण अपनी निजी भूमि पर बनाये जाने वाले प्रभावित व्यक्ति श्री ^{नैरवास} श्रीमती ^{नैरवास} पुत्र/पत्नी ^{नैरवास} सोनी मोरी के भूमि का नजरी नक्शा व खसरा




- प्रभावित खसरा नम्बर की चौहदी
1. पूरब में ^{खसरा नम्बर} 207 इन्दर सिंह का खेत
 2. पश्चिम में ^{खसरा नम्बर} 206 म. विजयपाल सिंह का खेत
 3. दक्षिण में ^{नैरवास} सोनी मोरी मार्ग
 4. उत्तर में ^{उत्तराखण्ड सरकार} का खसरा नम्बर 236

खसरा नम्बर 206 कुल रकबा 010 5 3 88 प्रभावित रकबा 010 2 0 8


 विजयपाल सिंह
 उपनिर्देशकारी
 डी.पी.ओ.
 सोनी मोरी


 इन्दर सिंह
 सोनी मोरी


 सोनी मोरी