Midwifery Training
Khost, Faizabad, Bamyan Afghanistan
February 19, 2010

The following responses are provided as a back check to a review of the Miwifery training facility. Our responses are based on the a review by URS dated August 21, 2009 and Plans Prepared by IOM dated 01 February, 2009 and provided to this office electronically.

Comment #	Back-Check	Reference
C-1	Civil /topo drawing were provided as part of this submittal and reviewed against standard practice, but did not provide a full construction level peer review. • The labels on the plan views should match the labels on the detail sheets to avoid confusion. New Grading Plan • No existing conditions or demolition plan was provided so it is unclear whether there is any work is proposed on or around the existing building and or how this might be affected by the proposed construction. • The ambulance drop off has a 13% slope at the building entrance. • Overland flow from the northwest area of the site spills into the ambulance drop off for collection. This could be handled off the pavement to avoid compromising emergency drop offs. • Coordinates are provided on the property corners. The plans should provide a reference as to the coordinate systems used. • Contours in the south corner of the site look incorrect. Stormwater Management Plan • The plan calls for a concrete box on both sides of the project and for roof drains to tie into these culverts. No inverts or slopes are provided. • The plan calls for four stormwater discharges southwest of the building. No topo is provided beyond the property line and no inverts are shown on the pipes so we cannot determine the adequacy of the offsite area to drain the system. • Was the drainage system reviewed to determine if offsite discharge will have adverse impacts on any offsite areas?	C101 C102

	• The plan calls for construction of drain outlets off the property, does this create any local issues? Need to provide details. • Grading and spot grads should be clarified on the drainage plan to insure proper capture of runoff.	
	Site Improvement Plan • Hatches and line types in the legend should match those on the plan. • Road geometry at 90° turns is shown graphically incorrect. • Several annotations are miss directed and should be corrected. • Callout for "stone masonry 81cm above the natural ground level", define what this is, provide detail and limits.	C103
	Water Plan • The water plan should be combined with sewer and drain to highlight conflicts. See comment C-2 • The plan calls for 3 fuel tanks but only two are shown as connected to anything. Not sure why this information is on the Water Plan • Drawing labeled NTS • The existing facility is not connected to the proposed water system, nor is the existing water source and its proximity to the proposed leachfield provided on the plans.	C104
	Sewer Water Site Plan • Water and drains do not show so it is difficult to check for conflicts. See comment C-2 • The calculations call for a 50CM tank for kitchen waist and the plan calls for a 30 CM • The site has two sewer systems, we assume that there is one for grey water and one for black water. However both systems are connected to the leach field. Needs clarification. • Two different details of the leaching area are on C218. This should be clarified. Detail the pile ends. • No finished grades are provided over or around the leaching system, but it appears to have 3 to 4 meters of cover. This system will need to be vented. Consideration should be given to reducing the depth of the sewer. The engineer should verify	C105

	that the pipes are structurally adequate for this cover. • The incinerator and fetus burial area are situated partially over the leach field. The field may be deep enough to tolerate the incinerator however with 3 to 4 M of backfill settlement could be an issue. Fetal Burial will be addressed under Comment C26 • Drawing labeled NTS	
C-2	We did not receive the (P Series) drawings, reference under this comment as part of our package, but the failure to show separation of underground utilities on the civil drawings, in response to this comment, creates some confusion especially for the construction of these utilities. See Comment C1	C104, C105, C102
C3	Sheet P001 was updated. The legend on Sheet C103 should be updated with abbreviations shown on the civil drawings.	C103
C4	Sheets C104 and C105 are still labels NTS	
C5	The lack of geotechnical and hydrogeologic data is a significant oversight. The proximity of the leachfield to the proposed well, about 130M for a 18240L/day system will require a more significant investigation than just a perk test. A burial area in close proximity to the well raises additional sanitary concerns. The project raises significant hydrogeologic concerns. See Comment C26	
C6	We received no well design or details	
C7	We concur this information should be provided	
C8	The response “will do during construction” begs the question, what if the soil doesn’t perk or if groundwater is too high. Geologic and hydrogeologic testing will allow an opportunity to address this issue before the project goes to construction.	
C9	We concur – no reference provided	
C10	We concur, this project is not ready to go to tender.	
C11	We have researched and used UPVC for underground piping on several projects in Iraq, due to the lack of availability of standard PVC. It is suitable for buried waste pipe but not always for potable water. Consideration should be given to using push on joints rather than solvent weld as it adds come flexibility to the system. **UPVC is not to be used for potable water unless certified by an independent internationally recognized agency.**	
C12	We typically use Schedule 40 for underground gravity sewer. We did not receive the specifications for review.	

C13	Details are provided on Sheet C216, but are not consistent with the notes on P001.	C216 & P001
C14	Details are provided on C219	
C15	Most spelling errors seem to have been corrected, still a couple on P001	
C16	Drain pipe has been eliminated from the schedule.	P001
C17	This item appears to have been corrected	
C18	We did not receive these sheets and so could not confirm.	
C19	The dimensions appear to have been added. • Note that there is a 50 CM and 30CM holding tank detail. See Comment C1 Sheet C105. • Details are duplicated on the on C211, C212, C213, C214, C215 and include structural reinforcement on Sheets C204, C205, C206, C207, C209 and C210. Redundant sheets should be eliminated or cross-referenced.	
C20	We do have sheet P118	
C21	Given the proposed pipe diameters we have no issue with the use of similar bedding.	C216
C22	The details and the general note conflict. Revise to match the notes, 300 mm of gravel fill is typical above the pipe.	C216 & P001
C23	While small diameter stone is desirable we consider sand appropriate bedding if stone is unavailable or cost prohibitive.	C216
C24	No specifications provided	
C25	No specifications provided	
C26	In addition to the ability to provide the required daily demand hydrologic calculations should also consider: • The proximity of the leachfield in relation to the well and the potential for pollution. • The affect of the well and leachfield on adjacent wells (if any). No water supply is shown to the existing building. Assuming one exists, if the proposed well is adversely affects it how will the facility operate? • Are there other wells adjacent to the site, and will they be affected? • How will the fetal burial area affect onsite or adjacent wells? Our sense is that this area should be moved offsite.	
C27	We fully concur with this comment. Failure to properly plan for the leachfield could derail the construction process, especially given the depth of the sewer. In additions, percolation rates will affect the	

	hydrologic calculations.	