U.S. Army Corps of Engineers (USACE)
CONSTANT HEAD

For use of this form, see EM 1110-2-1906; the Proponent agency is CECW-EC.

Purpose: This purpose of this form is to document constant head tests.

Date: _____

Project: _____

Boring No.: _____ Sample or Specimen No.: _____

1. Sample and Specimen

a. Weight In Grams						
(1) Tare Plus Dry Soil			d. Diameter of Specimen, cm.	D		
(2) Tare			e. Area of Specimen, Square cm.	A		
(3) Dry Soil	W_S		f. Initial Height of Specimen, cm.	L		
b. Specific Gravity	G		g. Initial Volume of Specimen, cc = AL	V		
c. Volume of Solids, cc = W_S /G	V_S		h. Initial Void Ratio = $(V - V_S)/V_S$	e		
			i. Distance Between Piezometer Taps, cm.	L_1		

2. Test Number

		1		2		3	
(1) Height of Specimen, cm.	L						
(2) Void Ratio = $(AL - V_S)/V_S$	e						
		a.	b.	a.	b.	a.	b.
(3) Reading of Piezometer 1, cm.	h_1						
(4) Reading of Piezometer 2, cm.	h_2						
(5) Head Loss, cm. = $h_1 - h_2$	h						
(6) Quantity of Flow, cc.	Q						
(7) Elapsed Time, Seconds	t						
(8) Water Temperature, °C	T						
(9) Viscosity Correction Factor[1]	R_T						
(10) Coefficient of Permeability,[2] cm./sec.	k_{20}						
	Avg.						

3. (1) Correction factor for viscosity of water at 20°C obtained from Table VII-1 (9).

(2) $$k_{20} = \frac{Q \times L \times R_T}{h \times A \times t}$$

Where L = Height of Specimen or Distance between Piezometer Taps if Used (10).

4. Remarks

5a. Technician (*Last, First Mi*)	b. Date	c. Technician's Signature
6a. Computed By (*Last, First Mi*)	b. Date	c. Computed By Signature
7a. Checked By (*Last, First Mi*)	b. Date	c. Checked By Signature

ENG FORM 3844, MAY 2023   PREVIOUS EDITIONS ARE OBSOLETE.