ARDAMAN & ASSOCIATES, INC. GEOTECHNICAL TESTING LABORATORY
HYDRAULIC CONDUCTIVITY TEST REPORT

CLIENT: E.R. Jahna Industries, Inc.

PROJECT: Laboratory Testing

FILE NO.: 14-13-0089

DATE SAMPLE RECEIVED: 08/11/14 SET UP: 08/12/14

DATE REPORTED: 08/15/14

ASTM D2434 TEST METHOD (Constant Head)

PERMEANT: ☒ Deaired Tap Water ☐ Other _____

G_s: 2.65 ☒ Assumed ☐ Measured

INCOMING LABORATORY SAMPLE NO.: **S-1**

LABORATORY IDENTIFICATION NO.: 140089/S1

SAMPLE DESCRIPTION: Very light brown sand, SP

SPECIMEN PREPARATION		
☒ Compacted	☒ Layers	No. of Layers 1
	☐ Kneading:	No. of Lifts _____ Spring _____lb. Blows per Lift _____
☐ Other		

Specimen Conditions							Test Conditions		Hydraulic Conductivity k_{20}	
H (cm)	D (cm)	V (cm^3)	WDS (grams)	w_c (%)	γ_d (lb/ft^3)	e	i_{avg}	Q (cm^3)	(cm/sec)	(ft/day)
19.30	11.40	1,970.0	3,110.96	25.4	98.6	0.678	0.3	216.7	**4.3x10-02**	**120**

COMMENTS: Specimen prepared dry in one lift vibrated to the requested initial dry density of 98.6 lb/ft^3 (i.e., 90% of the Modified Proctor maximum dry density). The specimen was deaired by percolating CO_2 upward through the specimen and then saturated from the bottom upward with deaired tap water.

Particle-Size Analysis ☒ ASTM D422 ☐ ASTM D1140-Method B		U.S. Standard Sieve Size	Gravel			Coarse Sand	Medium Sand		Fine Sand			
			3/4"	3/8"	No. 4	No. 10	No. 20	No. 40	No. 60	No. 100	No. 140	No. 200
Dry Mass (grams)	3110.96	Soil Passing (%, dry mass basis)	100	100	99.9	98.4	79.1	27.6	20.1	4.2	0.7	0.5

The test data and all associated project information presented hereon shall be held in confidence and disclosed to other parties only with the authorization of the Client. Physical and electronic records of each project are kept for a minimum of 7 years. Test samples are kept in storage for at least 10 working days after mailing of the test report, prior to being discarded, unless a longer storage period is requested in writing and accepted by Ardaman & Associates, Inc.

Where: H = Specimen height; D = Specimen diameter; V = Volume; WDS = Dry mass; w_c = Water content (ASTM D2216); γ_d = Dry density; e = Void ratio; i_{avg} = Average hydraulic gradient; Q = Flow volume; k_{20} = Saturated hydraulic conductivity at 20°C; and G_s = Specific gravity.

Checked By: JM Date: 08/15/14

Form SR-2D: Rev. 0