HERITAGE REMEDIATION/ENGINEERING, INC.

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SDMS Document
88530

October 16, 1990

Mr. A. William Nosil
Engineering Manager
HEXCEL Company
11555 Dublin Blvd.
Dublin, CA 94568

RE: Aquifer Characterizations
Fine Organics Project, Lodi, NJ
HR/E Project No. 60027

Dear Mr. Nosil:

This letter report documents our results of the slug testing efforts performed in the 22 ground-water control wells. Based on the data collected and estimated discharge rates, it appears ground-water removal from seven of the 22 wells will capture ground water and not exceed by a large amount the total volume of water the treatment system can handle.

AQUIFER CHARACTERIZATIONS

To further characterize the water table aquifer, slug tests were performed on all 22 control wells (CW). In addition, a pumping test was conducted on control well CW-21 using nearby control wells and monitoring wells for distance-drawdown measurements. Further characterizations were necessary due to the varied hydrogeological conditions encountered at the site.

In Situ Hydraulic Conductivity Tests

Slug tests were performed on control wells to estimate the hydraulic conductivity and transmissivity of the water table zone. These tests were

necessary to estimate the specific capacity of each well. Ground-water discharge rates were then approximated for each well prior to actual ground-water extraction and treatment. The discharge rate is based on an available drawdown of 2.5 feet.

The test entailed rapidly displacing a volume of water with a solid PVC cylinder and measuring the rate of recharge towards static levels. Both slug-in and slug-out tests were performed, but only the latter tests were evaluated. Changes in water levels were measured by utilizing a pressure transducer and recorded by a programmable hydraulic monitor. The method developed by Bouwer and Rice (1976) using the SLUGIX computer program was used for calculating the hydraulic conductivity and transmissivity for each well. The Theis non-equilibrium well formula (1935) was used to estimate the specific capacity (Q/s) for the slug tests. An analytical program by W.C. Walton, "Groundwater Pumping Tests-Design and Analysis, PT6" was used to calculate the transmissivity of the pump test wells. Table I summarizes the data from the tests.

These data correspond to observations noted during well development and from prior pump testing of CW-4, CW-5, CW-8, and CW-14. Since results of slug testing tend to be conservative, actual withdrawal rates to achieve 2.5 feet of drawdown may be higher than those estimated.

Pump Test of CW-21

To augment the previous pilot control well pump tests, an additional pump test was performed on control well CW-21 using nearby control wells (CW-20 and CW-22) and monitoring well (MW-28) for distance-drawdown measurements. This well (CW-21) was chosen due to indications it produces

a relatively large amount of water. Water levels were measured utilizing an electronic interface probe.

With a discharge rate of 2.0 gpm, influences were observed after two hours of continuous pumping in the perimeter wells in response to the pumping well. The air diaphragm used for this pump test seized after two hours of pumping and the test was terminated since influences were observed.

Well No.	Distance from Pumping Well (ft)	Observed Drawdown (ft)
CW-21	----	1.19
CW-20	19.5	0.31
CW-22	21.0	0.08
MW-28	13.0	0.24

CONCLUSIONS

The sum of the estimated discharge rates is 15.5 gpm for the 22 control wells. This is substantially more than the amount previously estimated. Based upon the information obtained from this study, it can be concluded that ground water should be extracted from the control wells that will produce the most water in a given area. Wells producing less than 0.25 gpm may not benefit ground-water recovery. Pump tests indicated potential radii of influences from 11.5 feet to 34 feet in eight hours of pumping. These radii of influences are expected to enlarge with continuous pumping until hydraulic equilibrium is maintained with recharge to the wells.

RECOMMENDATIONS

There are two viable options for control of ground-water at the site. One is to pump the most prolific wells utilizing the most efficient spacing. The other is injecting treated water into the Saddle River control wells with limited extraction from Main Street wells and DNAPL wells.

The first option is to recover ground water from a limited number of wells. The following seven prolific control wells for inclusion of ground-water recovery are as follows:

Well No.	Anticipated Discharge (gpm)
CW-3	0.3
CW-5	1.1
CW-9	0.9
CW-11	1.9
CW-15	1.3
CW-18	1.1
CW-21	2.3
	=====
Total	8.9 (~13,000 gpd)

This well spacing will create effective zones of influences over time for hydraulic control. The above total of 13,000 gpd still exceeds the amount of water the treatment system was designed to handle daily over a 10-hour period. To accommodate this, the treatment system would operate approximately 15 hours per day at 15 gpm.

The second option under consideration is to utilize the Saddle River control wells as injection wells for water from the treatment system. This will create a subsurface hydraulic barrier preventing migration of impacted ground water towards Saddle River. Ground-water recovery in the DNAPL wells will collect impacted ground water being forced away from the injection wells. Under this option, five of the six Main Street control wells (CW-1, CW-3,

CW-4, CW-5, and CW-6) plus two DNAPL recovery wells (RW7-1 and RW7-5) will be plumbed for ground-water recovery. This option will create approximately 4 gpm (~ 6,000 gpd) of water for treatment which can be handled effectively by the treatment system.

Should you have any questions or concerns regarding this report, please do not hesitate to call.

Respectfully,
Heritage Remediation/Engineering, Inc.

Robert R. Beckwith, CPG
Senior Hydrogeologist

RRB/

cc: Joe Ritchey
Jeff Macri

TABLE I
ESTIMATED SHALLOW (UPPER) AQUIFER
HYDRAULIC PROPERTIES

Well No.	HYDRAULIC CONDUCTIVITY K slug test (ft/min)	HYDRAULIC CONDUCTIVITY K pump test (ft/min)	TRANSMISSIVITY T slug test (gpd/ft)	TRANSMISSIVITY T pump test (gpd/ft)	SPECIFIC CAPACITY Q/s slug test (gpm/ft)	SPECIFIC CAPACITY Q/s pump test (gpm/ft)	ANTICIPATED DISCHARGE RATE Q slug test (gpm)	ANTICIPATED DISCHARGE RATE Q pump test (gpm)
CW-1	1.61×10^{-3}		7.99×10^{1}		8.25×10^{-2}		0.21	
CW-2	3.30×10^{-4}		1.66×10^{1}		2.11×10^{-2}		0.06	
CW-3	2.64×10^{-3}		1.41×10^{2}		1.37×10^{-1}		0.34	
CW-4	6.90×10^{-3}	7.06×10^{-3}	3.88×10^{2}	3.69×10^{2}	3.38×10^{-1}	2.31×10^{-1}	0.85	0.75
CW-5	9.11×10^{-3}	3.24×10^{-3}	5.37×10^{2}	1.79×10^{2}	4.53×10^{-1}	3.33×10^{-1}	1.13	1.25
CW-6	4.46×10^{-3}		1.30×10^{2}		1.27×10^{-1}		0.32	
CW-7	7.74×10^{-3}		5.32×10^{2}		4.50×10^{-1}		0.51	
CW-8	2.77×10^{-3}	1.56×10^{-3}	1.69×10^{2}	9.86×10^{1}	1.61×10^{-1}	2.00×10^{-1}	0.40	0.50
CW-9	6.19×10^{-3}		4.02×10^{2}		3.48×10^{-1}		0.87	
CW-10	4.00×10^{-3}		2.83×10^{2}		2.54×10^{-1}		0.64	
CW-11	1.29×10^{-2}		9.33×10^{2}		7.44×10^{-1}		1.86	
CW-12	6.91×10^{-3}		4.99×10^{2}		4.25×10^{-1}		1.06	
CW-13	1.18×10^{-3}		8.14×10^{1}		8.41×10^{-2}		0.21	
CW-14	1.37×10^{-3}	4.83×10^{-3}	9.10×10^{1}	3.12×10^{1}	9.31×10^{-2}	1.04×10^{-1}	0.23	0.13
CW-15	9.15×10^{-3}		6.06×10^{2}		5.05×10^{-1}		1.26	
CW-16	3.11×10^{-3}		2.11×10^{2}		1.96×10^{-1}		0.49	
CW-17	5.12×10^{-3}		3.85×10^{2}		3.35×10^{-1}		0.84	
CW-18	8.75×10^{-3}		5.26×10^{2}		4.43×10^{-1}		1.11	
CW-19	2.77×10^{-3}		2.01×10^{2}		1.87×10^{-1}		0.47	
CW-20	1.65×10^{-3}		1.20×10^{2}		1.18×10^{-1}		0.30	
CW-21	2.18×10^{-2}	9.33×10^{-1}	1.52×10^{3}	1.16×10^{3}	1.16×10^{0}	8.40×10^{-1}	2.92	2.00
CW-22	3.90×10^{-4}		2.86×10^{1}		3.40×10^{-2}		0.08	

K - Hydraulic Conductivity
T - Transmissivity
Q/s - Specific Capacity
Q - Discharge rate based on assumed drawdown of 2.5 feet

HERITAGE REMEDIATION / ENGINEERING, INC.

Calculation Form

Subject: Specific Capacity Control Wells
Calc. by: RES
Date: 10-2-90
Checked by:
Date:
Job No. 60027
Sheet No. 1 of

$$s = \frac{114.6\ Q}{T}\ w(u)$$

s = drawdown (ft)
Q = discharge (gpm)
T = Transmissivity (gpd/ft)

$$u = \frac{1.87\ r^2 S}{T t}$$

r^2 = well radius (ft)
S = Storage coefficient (0.18)
t = time (days)

CW-1

$$u = \frac{1.87 (.17)^2 (.18)}{79.9 \times 1}$$

T = .00742 ft²/min
T = 7.99 × 10¹ gpd/ft

$u = 1.22 \times 10^{-4}$
$w(u) = 8.45$

$$Q/s = \frac{T}{114.6\ w(u)} = \frac{7.99 \times 10^1}{114.6 \times 8.45} = 8.25 \times 10^{-2}\ \text{gpm/ft} \times 2.5\ \text{ft} = \underline{0.21\ \text{gpm}}\ Q$$

CW-2

T = 1.54 × 10⁻³ ft²/min
T = 1.66 × 10¹ gpd/ft

$$u = \frac{1.87 (.17)^2 (.18)}{16.6 \times 1}$$

$u = 5.86 \times 10^{-4}$
$w(u) = 6.86$

$$Q/s = \frac{16.6}{114.6 \times 6.86} = 2.11 \times 10^{-2}\ \text{gpm/ft} \times 2.5\ \text{ft} = \underline{0.06\ \text{gpm}}\ Q$$

CW-3

T = 1.31 × 10⁻² ft²/min
T = 1.41 × 10² gpd/ft

$$u = \frac{1.87 (.17)^2 (.18)}{141 \times 1}$$

$u = 6.90 \times 10^{-5}$
$w(u) = 9.00$

$$Q/s = \frac{141}{1146 \times 9.00} = 1.37 \times 10^{-1}\ \text{gpm/ft} \times 2.5\ \text{ft} = \underline{0.34\ \text{gpm}}\ Q$$

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Calculation Form

Subject: Specific Capacity Control wells
Calc. by: RES
Date: 10-2-90
Checked by:
Date:
Job No. 60027
Sheet No. 2 of

CW-4

$$u = \frac{1.87(.17)^2(.18)}{388 \times 1}$$

$T = 3.60 \times 10^{-2}$ ft²/min
$T = 3.88 \times 10^{2}$ gpd/ft

$u = 2.51 \times 10^{-5}$
$w(u) = 10.02$

$$Q/s = \frac{388}{114.6 \times 10.02} = 3.38 \times 10^{-1} \text{ gpm/ft} \times 2.5 \text{ ft} = \underline{0.85 \text{ gpm } Q}$$

CW-5

$$u = \frac{1.87(.17)^2(.18)}{537 \times 1}$$

$T = 4.99 \times 10^{-2}$ ft²/min
$T = 5.37 \times 10^{2}$ gpd/ft

$u = 1.81 \times 10^{-5}$
$w(u) = 10.35$

$$Q/s = \frac{537}{114.6 \times 10.35} = 4.53 \times 10^{-1} \text{ gpm/ft} \times 2.5 \text{ ft} = \underline{1.13 \text{ gpm } Q}$$

CW-6

$$u = \frac{1.87(.17)^2(.18)}{130 \times 1}$$

$T = 1.21 \times 10^{-2}$ ft²/min
$T = 1.30 \times 10^{2}$ gpm/ft

$u = 7.48 \times 10^{-5}$
$w(u) = 8.92$

$$Q/s = \frac{130}{114.6 \times 8.92} = 1.27 \times 10^{-1} \text{ gpm/ft} \times 2.5 = \underline{0.32 \text{ gpm } Q}$$

CW-7

$$u = \frac{1.87(.17)^2(.18)}{532 \times 1}$$

1440 x 1.41
$T = 0.04938$ ft²/min
$T = 5.32 \times 10^{2}$ gpd/ft

$u = 1.83 \times 10^{-5}$

$w(u) = 10.35$

$$Q/s = \frac{532}{114.6 \times 10.35} = .45 \text{ gpm/ft} \times 2.5 = .51 \text{ gpm } Q$$

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Calculation Form

Subject: Specific Capacity Control Wells
Calc. by: HW
Date: 10-2-90
Checked by:
Date:
Job No. 600027
Sheet No. 3 of

CW-8

$T = 1.567 \times 10^{-2}\ ft^2/min$
$T = 168.8\ gpd/ft$

$$u = \frac{1.87(.17)^2(.18)}{168.8}$$

$$= 5.76 \times 10^{-5}$$

$$W(u) = 9.1779$$

$$Q/s = \frac{168.8}{114.6 \times 9.1779} = \frac{168.8}{1051.8} = 1.61 \times 10^{-1} \times 2.5ft = .40\ gpm\ Q$$

CW-9

$T = 3.73 \times 10^{-2}\ ft^2/min$
$T = 401.7\ gpd/ft$

$$u = \frac{1.87(.17)^2(.18)}{401.7 \times 1}$$

$$= 2.42 \times 10^{-5}$$

$$W(u) = 10.06$$

$$Q/s = \frac{401.7}{114.6 \times 10.06} = \frac{401.7}{1152.87} = 3.48 \times 10^{-1} \times 2.5ft = .87\ gpm\ Q$$

CW-10

$T = 0.02625\ ft^2/min$
$T = 282.74\ gpd/ft$

$$u = \frac{1.87(.17)^2(.18)}{282.74 \times 1}$$

$$u = 3.44 \times 10^{-5}$$

$$W(u) = 9.712$$

$$Q/s = \frac{282.74}{9.71 \times 114.6} = \frac{282.74}{1112.76} = .254 \times 2.5ft = .64\ gpm\ Q$$

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Calculation Form

Subject: Specific Capacity / Control Wells
Calc. by: RCB
Date: 10-3-90
Checked by:
Date:
Job No. 600.27
Sheet No. 4 of

CW-11

$u = \frac{1.87(.17)^2(.18)}{933}$

$T = 8.66 \times 10^{-2}\ ft^2/min$
$T = 9.33 \times 10^{2}\ gpd/ft$

$u = 1.04 \times 10^{-5}$
$w(u) = 10.94$

$Q/s = \frac{933}{114.6 \times 10.94} = 7.44 \times 10^{-1}\ gpm/ft \times 2.5\ ft = \underline{1.86\ gpm}\ Q$

CW-12

$u = \frac{1.87(.17)^2(.18)}{499}$

$T = 4.63 \times 10^{-2}\ ft^2/min$
$T = 4.99 \times 10^{2}\ gpd/ft$

$u = 1.95 \times 10^{-5}$

$w(u) = 10.24$

$Q/s = \frac{499}{114.6 \times 10.24} = 4.25 \times 10^{-1}\ gpm/ft \times 2.5\ ft = \underline{1.06\ gpm}\ Q$

CW-13

$u = \frac{1.87(.17)^2(.18)}{81.4}$

$T = 7.56 \times 10^{-3}\ ft^2/min$
$T = 8.14 \times 10^{1}\ gpd/ft$

$u = 1.20 \times 10^{-4}$
$w(u) = 8.45$

$Q/s = \frac{81.4}{114.6 \times 8.45} = 8.41 \times 10^{-2}\ gpm/ft \times 2.5\ ft = \underline{0.21\ gpm}\ Q$

CW-14

$u = \frac{1.87(.17)^2(.18)}{91.0}$

$T = 8.45 \times 10^{-3}\ ft^2/min$
$T = 9.10 \times 10^{1}\ gpd/ft$

$u = 1.07 \times 10^{-4}$
$w(u) = 8.53$

$Q/s = \frac{91}{114.6 \times 8.53} = 9.31 \times 10^{-2}\ gpm/ft \times 2.5\ ft = \underline{0.23\ gpm}\ Q$

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Calculation Form

Subject: Specific Capacity Control Wells
Calc. by: RCS
Date: 10-3-90
Checked by:
Date:
Job No. 60027
Sheet No. 5 of

CW-15

$u = \frac{1.87(.17)^2(.18)}{606}$

$T = 5.63 \times 10^{-2}$ ft²/min
$T = 6.06 \times 10^{2}$ gpd/ft

$u = 1.61 \times 10^{-5}$
$W(u) = 10.47$

$Q/s = \frac{606}{114.6 \times 10.47} = 5.05 \times 10^{-1}$ gpm/ft $\times 2.5$ ft $= \underline{1.26 \text{ gpm}}$ Q

CW-16

$u = \frac{1.87(.17)^2(.18)}{211}$

$T = 1.96 \times 10^{-2}$ ft²/min
$T = 2.11 \times 10^{2}$ gpd/ft

$u = 4.61 \times 10^{-5}$
$W(u) = 9.41$

$Q/s = \frac{211}{114.6 \times 9.41} = 1.96 \times 10^{-1}$ gpm/ft $\times 2.5$ ft $= \underline{0.49 \text{ gpm}}$ Q

CW-17

$u = \frac{1.87(.17)^2(.18)}{385}$

$T = 3.57 \times 10^{-2}$ ft²/min
$T = 3.85 \times 10^{2}$ gpd/ft

$u = 2.53 \times 10^{-5}$
$W(u) = 10.02$

$Q/s = \frac{385}{114.6 \times 10.02} = 3.35 \times 10^{-1}$ gpm/ft $\times 2.5$ ft $= \underline{0.84 \text{ gpm}}$ Q

CW-18

$u = \frac{(1.87)(.17)^2(.18)}{526}$

$T = 4.88 \times 10^{-2}$ ft²/min
$T = 5.26 \times 10^{2}$ gpd/ft

$u = 1.85 \times 10^{-5}$

$W(u) = 10.35$

$Q/s = \frac{526}{114.6 \times 10.35} = 4.43 \times 10^{-1}$ gpm/ft $\times$ 2.5ft $=$ 1.11 gpm Q

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Calculation Form

Subject: Specific Capacity Control Wells
Job No. 60027
Calc. by: HW
Checked by:
Sheet No. 6 of
Date: 10-10-90
Date:

CW-19

1440 · 7.48

$u = \frac{9.73 \times 10^{-3}}{201}$

$T = 1.86 \times 10^{-2}$ ft²/min
$T = 2.01 \times 10^{2}$ gpd/ft

$u = 4.84 \times 10^{-5}$

$W(u) = 9.367$

$Q/s = \frac{201}{114.6 \times 9.367} = 1.87 \times 10^{-1}$ gpm/ft $\times$ 2.5 ft $= 4.68 \times 10^{-1}$ gpm Q

CW-20

$u = \frac{9.73 \times 10^{-3}}{120}$

$T = 1.11 \times 10^{-2}$ ft²/min
$T = 1.20 \times 10^{2}$ gpd/ft

$u = 8.11 \times 10^{-5}$

$W(u) = 8.84$

$Q/s = \frac{120}{114.6 \times 8.84} = 1.18 \times 10^{-1}$ gpm/ft $\times$ 2.5 ft $= .296$ gpm Q

CW-21

$u = \frac{9.73 \times 10^{-3}}{1.52 \times 10^{3}}$

$T = 1.41 \times 10^{-1}$ ft²/min
$T = 1.52 \times 10^{3}$ gpd/ft

$u = 6.40 \times 10^{-6}$

$W(u) = 11.38$

$Q/s = \frac{1.52 \times 10^{3}}{114.6 \times 11.38} = 1.16$ gpm/ft $\times$ 2.5 ft $= 2.92$ gpm Q

CW-22

$u = \frac{9.73 \times 10^{-3}}{28.64 \text{ gpd/ft}}$

$T = 2.68 \times 10^{-3}$ ft²/min
$T = 28.64$ gpd/ft

$u = 3.4 \times 10^{-4}$

$W(u) = 7.41$

$Q/s = \frac{28.64}{114.6 \times 7.41} = 3.40 \times 10^{-2}$ gpm/ft $\times$ 2.5 ft. $= .084$ gpm

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DATA SET: CW01SO

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-1
COUNTY:	BERGEN COUNTY	WELL DEPTH:	12.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.400 ft
AQUIFER:	Endless	THICKNESS:	4.60 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	12.00 ft
INITIAL HEAD:	2.500 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.00742square ft/min

CONDUCTIVITY: 0.00161 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.50		
2	0.00660	2.60		
3	0.0100	2.55		
4	0.0133	1.00		
5	0.0167	1.74		
6	0.0200	2.39		
7	0.0233	2.05		
8	0.0267	1.94		
9	0.0300	2.02		
10	0.0467	1.96		
11	0.0633	1.95		
12	0.0800	1.93		
13	0.0967	1.91		
14	0.113	1.90		
15	0.130	1.86		
16	0.146	1.84		
17	0.180	1.83		
18	0.196	1.81		
19	0.246	1.76		
20	0.280	1.74		
21	0.330	1.71		
22	0.413	1.66		
23	0.496	1.62		

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No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.580	1.57		
25	0.663	1.53		
26	0.746	1.49		
27	0.913	1.40		
28	1.08	1.33		
29	1.24	1.27		
30	1.49	1.08		
31	1.74	0.740		
32	1.99	0.650		
33	2.49	0.580		
34	2.99	0.560		
35	3.49	0.540		
36	3.99	0.530		
37	4.49	0.520		
38	5.49	0.510		
39	6.49	0.480		
40	7.49	0.460		
41	8.99	0.430		
42	9.99	0.420		
43	11.99	0.380		
44	13.99	0.350		
45	17.99	0.280		
46	19.99	0.260		
47	23.99	0.200		
48	27.99	0.150		
49	33.99	0.110		
50	39.99	0.0700		
51	47.99	0.0500		
52	55.99	0.0300		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW02S0

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-2
COUNTY:	BERGEN COUNTY	WELL DEPTH:	12.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.370 ft
AQUIFER:	Endless	THICKNESS:	4.63 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	7.000 ft	SCREEN BASE:	12.00 ft
INITIAL HEAD:	2.690 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.00154square ft/min

CONDUCTIVITY: 0.00033 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.69		
2	0.00660	2.59		
3	0.0100	2.45		
4	0.0133	2.48		
5	0.0167	2.59		
6	0.0200	2.58		
7	0.0233	2.48		
8	0.0300	1.43		
9	0.0467	1.93		
10	0.0633	1.95		
11	0.0800	1.91		
12	0.0967	1.87		
13	0.130	1.80		
14	0.146	1.77		
15	0.180	1.69		
16	0.213	1.59		
17	0.246	1.51		
18	0.296	1.36		
19	0.330	1.16		
20	0.413	0.900		
21	0.496	0.800		
22	0.580	0.770		
23	0.746	0.720		

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No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.913	0.700		
25	1.08	0.700		
26	1.24	0.690		
27	1.49	0.680		
28	1.83	0.680		
29	1.99	0.680		
30	2.49	0.670		
31	2.99	0.670		
32	3.99	0.660		
33	4.49	0.660		
34	5.49	0.650		
35	6.49	0.650		
36	7.99	0.640		
37	9.49	0.640		
38	11.99	0.630		
39	13.99	0.630		
40	15.99	0.630		
41	19.99	0.620		
42	23.99	0.620		
43	27.99	0.620		
44	33.99	0.610		
45	39.99	0.600		
46	47.99	0.580		
47	55.99	0.580		
48	67.99	0.570		
49	81.99	0.570		
50	97.99	0.550		
51	119.9	0.550		
52	139.9	0.550		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW03S0

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-3
COUNTY:	BERGEN COUNTY	WELL DEPTH:	12.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.040 ft
AQUIFER:	Endless	THICKNESS:	4.96 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	7.000 ft	SCREEN BASE:	12.00 ft
INITIAL HEAD:	2.240 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01309square ft/min

CONDUCTIVITY: 0.00264 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.24		
2	0.00660	1.13		
3	0.0100	2.07		
4	0.0133	2.13		
5	0.0167	1.81		
6	0.0200	1.92		
7	0.0233	1.88		
8	0.0267	1.89		
9	0.0300	1.88		
10	0.0467	1.87		
11	0.0633	1.84		
12	0.0800	1.82		
13	0.0967	1.80		
14	0.113	1.77		
15	0.130	1.74		
16	0.146	1.72		
17	0.163	1.68		
18	0.180	1.65		
19	0.196	1.62		
20	0.213	1.59		
21	0.230	1.56		
22	0.246	1.52		
23	0.263	1.49		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.46		
25	0.296	1.42		
26	0.313	1.39		
27	0.330	1.36		
28	0.413	1.19		
29	0.496	1.01		
30	0.580	0.640		
31	0.663	0.560		
32	0.746	0.530		
33	0.830	0.550		
34	0.913	0.520		
35	0.996	0.500		
36	1.08	0.490		
37	1.16	0.490		
38	1.24	0.490		
39	1.33	0.490		
40	1.41	0.480		
41	1.49	0.460		
42	1.58	0.440		
43	1.66	0.440		
44	1.74	0.430		
45	1.83	0.420		
46	1.91	0.420		
47	1.99	0.420		
48	2.49	0.400		
49	2.99	0.390		
50	3.49	0.370		
51	3.99	0.360		
52	4.49	0.350		
53	4.99	0.340		
54	5.49	0.330		
55	5.99	0.330		
56	6.49	0.320		
57	6.99	0.310		
58	7.49	0.310		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW04S1

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-4
COUNTY:	BERGEN COUNTY	WELL DEPTH:	11.50 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	6.280 ft
AQUIFER:	Endless	THICKNESS:	5.22 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	6.500 ft	SCREEN BASE:	11.50 ft
INITIAL HEAD:	1.400 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.03604square ft/min

CONDUCTIVITY: 0.00690 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.40		
2	0.00660	1.37		
3	0.0100	1.33		
4	0.0133	1.27		
5	0.0167	1.23		
6	0.0200	1.18		
7	0.0233	1.13		
8	0.0267	1.12		
9	0.0300	1.10		
10	0.0467	0.890		
11	0.0633	0.750		
12	0.0800	0.620		
13	0.0967	0.510		
14	0.113	0.420		
15	0.130	0.360		
16	0.146	0.330		
17	0.163	0.320		
18	0.180	0.310		
19	0.196	0.300		
20	0.213	0.300		
21	0.230	0.290		
22	0.246	0.290		
23	0.263	0.280		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.280		
25	0.296	0.280		
26	0.313	0.270		
27	0.330	0.270		
28	0.413	0.260		
29	0.496	0.250		
30	0.580	0.240		
31	0.663	0.230		
32	0.746	0.220		
33	0.830	0.210		
34	0.913	0.210		
35	0.996	0.200		
36	1.08	0.190		
37	1.16	0.190		
38	1.24	0.180		
39	1.33	0.180		
40	1.41	0.170		
41	1.49	0.160		
42	1.58	0.160		
43	1.66	0.150		
44	1.74	0.150		
45	1.83	0.140		
46	1.91	0.140		
47	1.99	0.140		
48	2.49	0.110		
49	2.99	0.0900		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

* HERITAGE REMEDIATION/ENGINEERING *

DATA SET: CW05S1

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-5
COUNTY:	BERGEN COUNTY	WELL DEPTH:	11.50 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	6.020 ft
AQUIFER:	Endless	THICKNESS:	5.48 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	6.500 ft	SCREEN BASE:	11.50 ft
INITIAL HEAD:	0.700 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.04992square ft/min

CONDUCTIVITY: 0.00911 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	0.700		
2	0.00660	0.650		
3	0.0100	0.620		
4	0.0133	0.580		
5	0.0167	0.490		
6	0.0200	0.510		
7	0.0233	0.470		
8	0.0267	0.440		
9	0.0300	0.420		
10	0.0467	0.300		
11	0.0633	0.230		
12	0.0800	0.190		
13	0.0967	0.180		
14	0.113	0.170		
15	0.130	0.160		
16	0.146	0.150		
17	0.163	0.140		
18	0.180	0.140		
19	0.196	0.140		
20	0.213	0.130		
21	0.230	0.130		
22	0.246	0.130		
23	0.263	0.120		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.120		
25	0.296	0.120		
26	0.313	0.120		
27	0.330	0.110		
28	0.413	0.100		
29	0.496	0.100		
30	0.580	0.0900		
31	0.663	0.0900		
32	0.746	0.0800		
33	0.830	0.0800		
34	0.913	0.0800		
35	0.996	0.0700		
36	1.08	0.0700		
37	1.16	0.0700		
38	1.24	0.0700		
39	1.33	0.0600		
40	1.41	0.0600		
41	1.49	0.0600		
42	1.58	0.0600		
43	1.66	0.0600		
44	1.74	0.0500		
45	1.83	0.0500		
46	1.91	0.0500		
47	1.99	0.0500		
48	2.49	0.0400		
49	2.99	0.0400		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW06S1

CLIENT:	HEXCEL CORPORATION	DATE:	1-OCT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-6
COUNTY:	BERGEN COUNTY	WELL DEPTH:	9.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	6.280 ft
AQUIFER:	Endless	THICKNESS:	2.72 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	4.000 ft	SCREEN BASE:	9.00 ft
INITIAL HEAD:	0.480 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01212square ft/min

CONDUCTIVITY: 0.00446 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	0.480		
2	0.00660	0.450		
3	0.0100	0.420		
4	0.0133	0.410		
5	0.0167	0.390		
6	0.0200	0.360		
7	0.0233	0.350		
8	0.0267	0.340		
9	0.0300	0.330		
10	0.0467	0.260		
11	0.0633	0.230		
12	0.0800	0.220		
13	0.0967	0.210		
14	0.113	0.200		
15	0.130	0.200		
16	0.146	0.190		
17	0.163	0.190		
18	0.180	0.180		
19	0.196	0.180		
20	0.213	0.180		
21	0.230	0.180		
22	0.246	0.180		
23	0.263	0.170		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.170		
25	0.296	0.170		
26	0.313	0.170		
27	0.330	0.160		
28	0.413	0.160		
29	0.496	0.150		
30	0.580	0.150		
31	0.663	0.140		
32	0.746	0.140		
33	0.830	0.140		
34	0.913	0.140		
35	0.996	0.130		
36	1.08	0.130		
37	1.16	0.130		
38	1.24	0.120		
39	1.33	0.120		
40	1.41	0.120		
41	1.49	0.120		
42	1.58	0.110		
43	1.66	0.110		
44	1.74	0.110		
45	1.83	0.110		
46	1.91	0.110		
47	1.99	0.100		
48	2.49	0.0900		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW07S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-7
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.620 ft
AQUIFER:	Endless	THICKNESS:	6.38 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.980 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.04938square ft/min

CONDUCTIVITY: 0.00774 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.98		
2	0.00660	1.93		
3	0.0100	1.88		
4	0.0133	1.83		
5	0.0167	1.80		
6	0.0200	1.76		
7	0.0233	1.70		
8	0.0267	1.69		
9	0.0300	1.64		
10	0.0467	1.47		
11	0.0633	1.31		
12	0.0800	1.17		
13	0.0967	1.05		
14	0.113	0.960		
15	0.130	0.880		
16	0.146	0.830		
17	0.163	0.790		
18	0.180	0.750		
19	0.196	0.720		
20	0.213	0.700		
21	0.230	0.680		
22	0.246	0.660		
23	0.263	0.640		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.630		
25	0.296	0.610		
26	0.313	0.600		
27	0.330	0.580		
28	0.413	0.540		
29	0.496	0.500		
30	0.580	0.460		
31	0.663	0.430		
32	0.746	0.400		
33	0.830	0.370		
34	0.913	0.350		
35	0.996	0.330		
36	1.08	0.310		
37	1.16	0.280		
38	1.24	0.270		
39	1.33	0.260		
40	1.41	0.240		
41	1.49	0.230		
42	1.58	0.220		
43	1.66	0.210		
44	1.74	0.200		
45	1.83	0.190		
46	1.91	0.180		
47	1.99	0.170		
48	2.49	0.130		
49	2.99	0.100		
50	3.49	0.0800		
51	3.99	0.0700		
52	4.49	0.0600		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW08S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-8
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	8.350 ft
AQUIFER:	Endless	THICKNESS:	5.65 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.140 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01567square ft/min

CONDUCTIVITY: 0.00277 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.14		
2	0.00660	2.13		
3	0.0100	2.13		
4	0.0133	2.11		
5	0.0167	2.11		
6	0.0200	2.09		
7	0.0233	2.09		
8	0.0267	2.09		
9	0.0300	2.08		
10	0.0467	2.07		
11	0.0633	2.03		
12	0.0800	2.01		
13	0.0967	1.99		
14	0.113	1.97		
15	0.130	1.96		
16	0.146	1.94		
17	0.163	1.92		
18	0.180	1.91		
19	0.196	1.89		
20	0.213	1.88		
21	0.230	1.86		
22	0.246	1.85		
23	0.263	1.83		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.82		
25	0.296	1.81		
26	0.313	1.79		
27	0.330	1.78		
28	0.413	1.72		
29	0.496	1.66		
30	0.580	1.61		
31	0.663	1.56		
32	0.746	1.51		
33	0.830	1.46		
34	0.913	1.42		
35	0.996	1.37		
36	1.08	1.33		
37	1.16	1.29		
38	1.24	1.25		
39	1.33	1.22		
40	1.41	1.18		
41	1.49	1.15		
42	1.58	1.11		
43	1.66	1.08		
44	1.74	1.05		
45	1.83	1.02		
46	1.91	0.990		
47	1.99	0.960		
48	2.49	0.810		
49	2.99	0.690		
50	3.49	0.580		
51	3.99	0.510		
52	4.49	0.430		
53	4.99	0.380		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW09S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-9
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.980 ft
AQUIFER:	Endless	THICKNESS:	6.02 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.960 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.03724square ft/min

CONDUCTIVITY: 0.00619 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.96		
2	0.00660	1.95		
3	0.0100	1.93		
4	0.0133	1.91		
5	0.0167	1.90		
6	0.0200	1.89		
7	0.0233	1.89		
8	0.0267	1.85		
9	0.0300	1.84		
10	0.0467	1.76		
11	0.0633	1.69		
12	0.0800	1.62		
13	0.0967	1.57		
14	0.113	1.50		
15	0.130	1.44		
16	0.146	1.38		
17	0.163	1.33		
18	0.180	1.28		
19	0.196	1.24		
20	0.213	1.20		
21	0.230	1.17		
22	0.246	1.14		
23	0.263	1.11		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.08		
25	0.296	1.06		
26	0.313	1.04		
27	0.330	1.02		
28	0.413	0.930		
29	0.496	0.880		
30	0.580	0.830		
31	0.663	0.780		
32	0.746	0.740		
33	0.830	0.710		
34	0.913	0.680		
35	0.996	0.640		
36	1.08	0.620		
37	1.16	0.590		
38	1.24	0.560		
39	1.33	0.540		
40	1.41	0.520		
41	1.49	0.490		
42	1.58	0.470		
43	1.66	0.440		
44	1.74	0.420		
45	1.83	0.400		
46	1.91	0.380		
47	1.99	0.360		
48	2.49	0.240		
49	2.99	0.160		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW10S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-10
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.440 ft
AQUIFER:	Endless	THICKNESS:	6.56 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.140 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.02625square ft/min

CONDUCTIVITY: 0.00400 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.14		
2	0.00660	2.10		
3	0.0100	2.09		
4	0.0133	2.07		
5	0.0167	2.06		
6	0.0200	2.05		
7	0.0233	2.02		
8	0.0267	2.01		
9	0.0300	1.99		
10	0.0467	1.89		
11	0.0633	1.81		
12	0.0800	1.72		
13	0.0967	1.64		
14	0.113	1.55		
15	0.130	1.49		
16	0.146	1.42		
17	0.163	1.36		
18	0.180	1.30		
19	0.196	1.24		
20	0.213	1.19		
21	0.230	1.15		
22	0.246	1.11		
23	0.263	1.08		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.05		
25	0.296	1.02		
26	0.313	1.00		
27	0.330	0.980		
28	0.413	0.900		
29	0.496	0.850		
30	0.580	0.810		
31	0.663	0.780		
32	0.746	0.750		
33	0.830	0.730		
34	0.913	0.700		
35	0.996	0.690		
36	1.08	0.670		
37	1.16	0.660		
38	1.24	0.640		
39	1.33	0.630		
40	1.41	0.620		
41	1.49	0.600		
42	1.58	0.590		
43	1.66	0.580		
44	1.74	0.570		
45	1.83	0.560		
46	1.91	0.550		
47	1.99	0.540		
48	2.49	0.490		
49	2.99	0.440		
50	3.49	0.400		
51	3.99	0.370		
52	4.49	0.340		
53	4.99	0.310		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW11S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-11
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.300 ft
AQUIFER:	Endless	THICKNESS:	6.70 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.080 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.08658square ft/min

CONDUCTIVITY: 0.01292 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.08		
2	0.00660	1.03		
3	0.0100	0.970		
4	0.0133	0.920		
5	0.0167	0.880		
6	0.0200	0.840		
7	0.0233	0.800		
8	0.0267	0.760		
9	0.0300	0.710		
10	0.0467	0.560		
11	0.0633	0.460		
12	0.0800	0.380		
13	0.0967	0.320		
14	0.113	0.280		
15	0.130	0.240		
16	0.146	0.210		
17	0.163	0.190		
18	0.180	0.170		
19	0.196	0.150		
20	0.213	0.140		
21	0.230	0.130		
22	0.246	0.120		
23	0.263	0.110		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.110		
25	0.296	0.100		
26	0.313	0.0900		
27	0.330	0.0900		
28	0.413	0.0700		
29	0.496	0.0700		
30	0.580	0.0600		
31	0.663	0.0500		
32	0.746	0.0400		
33	0.830	0.0400		
34	0.913	0.0300		
35	0.996	0.0300		
36	1.08	0.0300		
37	1.16	0.0300		
38	1.24	0.0200		
39	1.33	0.0200		
40	1.41	0.0200		
41	1.49	0.0200		
42	1.58	0.0200		
43	1.66	0.0200		
44	1.74	0.0200		
45	1.83	0.0200		
46	1.91	0.0200		
47	1.99	0.0200		
48	2.49	0.0100		
49	2.99	0.0100		
50	3.49	0.0100		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW12S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-12
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.300 ft
AQUIFER:	Endless	THICKNESS:	6.70 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.970 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.04629square ft/min

CONDUCTIVITY: 0.00691 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.97		
2	0.00660	1.93		
3	0.0100	1.92		
4	0.0133	1.90		
5	0.0167	1.88		
6	0.0200	1.84		
7	0.0233	1.83		
8	0.0267	1.79		
9	0.0300	1.77		
10	0.0467	1.68		
11	0.0633	1.56		
12	0.0800	1.46		
13	0.0967	1.36		
14	0.113	1.27		
15	0.130	1.20		
16	0.146	1.13		
17	0.163	1.07		
18	0.180	1.02		
19	0.196	0.970		
20	0.213	0.920		
21	0.230	0.890		
22	0.246	0.850		
23	0.263	0.820		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.800		
25	0.296	0.770		
26	0.313	0.750		
27	0.330	0.730		
28	0.413	0.650		
29	0.496	0.600		
30	0.580	0.550		
31	0.663	0.510		
32	0.746	0.480		
33	0.830	0.460		
34	0.913	0.430		
35	0.996	0.410		
36	1.08	0.390		
37	1.16	0.370		
38	1.24	0.350		
39	1.33	0.340		
40	1.41	0.320		
41	1.49	0.300		
42	1.58	0.290		
43	1.66	0.280		
44	1.74	0.270		
45	1.83	0.260		
46	1.91	0.250		
47	1.99	0.230		
48	2.49	0.180		
49	2.99	0.140		
50	3.49	0.110		
51	3.99	0.0900		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW13S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-13
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.570 ft
AQUIFER:	Endless	THICKNESS:	6.43 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.060 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.00756square ft/min

CONDUCTIVITY: 0.00118 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.06		
2	0.00660	2.05		
3	0.0100	2.06		
4	0.0133	2.05		
5	0.0167	2.04		
6	0.0200	2.04		
7	0.0233	2.04		
8	0.0267	2.04		
9	0.0300	2.04		
10	0.0467	2.02		
11	0.0633	2.02		
12	0.0800	2.00		
13	0.0967	1.99		
14	0.113	1.98		
15	0.130	1.98		
16	0.146	1.97		
17	0.163	1.97		
18	0.180	1.96		
19	0.196	1.95		
20	0.213	1.95		
21	0.230	1.94		
22	0.246	1.93		
23	0.263	1.93		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.92		
25	0.296	1.91		
26	0.313	1.91		
27	0.330	1.90		
28	0.413	1.87		
29	0.496	1.84		
30	0.580	1.82		
31	0.663	1.80		
32	0.746	1.77		
33	0.830	1.75		
34	0.913	1.73		
35	0.996	1.71		
36	1.08	1.69		
37	1.16	1.67		
38	1.24	1.65		
39	1.33	1.63		
40	1.41	1.61		
41	1.49	1.59		
42	1.58	1.57		
43	1.66	1.56		
44	1.74	1.54		
45	1.83	1.52		
46	1.91	1.51		
47	1.99	1.49		
48	2.49	1.39		
49	2.99	1.30		
50	3.49	1.21		
51	3.99	1.14		
52	4.49	1.06		
53	4.99	1.00		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW14S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-14
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.810 ft
AQUIFER:	Endless	THICKNESS:	6.19 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.390 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.00845square ft/min

CONDUCTIVITY: 0.00137 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.39		
2	0.00660	2.40		
3	0.0100	2.40		
4	0.0133	2.40		
5	0.0167	2.40		
6	0.0200	2.44		
7	0.0233	2.44		
8	0.0267	2.45		
9	0.0300	2.44		
10	0.0467	2.38		
11	0.0633	2.37		
12	0.0800	2.36		
13	0.0967	2.36		
14	0.113	2.35		
15	0.130	2.34		
16	0.146	2.34		
17	0.163	2.33		
18	0.180	2.35		
19	0.196	2.31		
20	0.213	2.31		
21	0.230	2.31		
22	0.246	2.29		
23	0.263	2.28		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	2.28		
25	0.296	2.27		
26	0.313	2.26		
27	0.330	2.26		
28	0.413	2.23		
29	0.496	2.19		
30	0.580	2.17		
31	0.663	2.13		
32	0.746	2.11		
33	0.830	2.07		
34	0.913	2.04		
35	0.996	2.01		
36	1.08	1.98		
37	1.16	1.96		
38	1.24	1.93		
39	1.33	1.90		
40	1.41	1.87		
41	1.49	1.84		
42	1.58	1.82		
43	1.66	1.79		
44	1.74	1.76		
45	1.83	1.74		
46	1.91	1.71		
47	1.99	1.69		
48	2.49	1.54		
49	2.99	1.41		
50	3.49	1.29		
51	3.99	1.18		
52	4.49	1.08		
53	4.99	0.990		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

* HERITAGE REMEDIATION/ENGINEERING *

DATA SET: CW15S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-15
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.850 ft
AQUIFER:	Endless	THICKNESS:	6.15 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.790 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.05628square ft/min

CONDUCTIVITY: 0.00915 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.79		
2	0.00660	1.74		
3	0.0100	1.72		
4	0.0133	1.68		
5	0.0167	1.66		
6	0.0200	1.61		
7	0.0233	1.55		
8	0.0267	1.51		
9	0.0300	1.48		
10	0.0467	1.35		
11	0.0633	1.15		
12	0.0800	1.01		
13	0.0967	0.890		
14	0.113	0.820		
15	0.130	0.770		
16	0.146	0.740		
17	0.163	0.720		
18	0.180	0.700		
19	0.196	0.680		
20	0.213	0.660		
21	0.230	0.650		
22	0.246	0.630		
23	0.263	0.620		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.610		
25	0.296	0.600		
26	0.313	0.590		
27	0.330	0.580		
28	0.413	0.530		
29	0.496	0.490		
30	0.580	0.450		
31	0.663	0.420		
32	0.746	0.390		
33	0.830	0.360		
34	0.913	0.340		
35	0.996	0.320		
36	1.08	0.290		
37	1.16	0.280		
38	1.24	0.260		
39	1.33	0.240		
40	1.41	0.230		
41	1.49	0.210		
42	1.58	0.200		
43	1.66	0.190		
44	1.74	0.180		
45	1.83	0.170		
46	1.91	0.160		
47	1.99	0.150		
48	2.49	0.100		
49	2.99	0.0600		
50	3.49	0.0300		
51	3.99	0.0100		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW16S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-16
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.700 ft
AQUIFER:	Endless	THICKNESS:	6.30 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.100 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01957square ft/min

CONDUCTIVITY: 0.00311 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.10		
2	0.00660	2.06		
3	0.0100	2.03		
4	0.0133	1.98		
5	0.0167	1.95		
6	0.0200	1.92		
7	0.0233	1.89		
8	0.0267	1.85		
9	0.0300	1.83		
10	0.0467	1.69		
11	0.0633	1.59		
12	0.0800	1.47		
13	0.0967	1.38		
14	0.113	1.29		
15	0.130	1.20		
16	0.146	1.11		
17	0.163	1.06		
18	0.180	1.02		
19	0.196	0.990		
20	0.213	0.970		
21	0.230	0.950		
22	0.246	0.930		
23	0.263	0.920		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.910		
25	0.296	0.900		
26	0.313	0.890		
27	0.330	0.880		
28	0.413	0.840		
29	0.496	0.820		
30	0.580	0.800		
31	0.663	0.770		
32	0.746	0.760		
33	0.830	0.740		
34	0.913	0.720		
35	0.996	0.710		
36	1.08	0.700		
37	1.16	0.690		
38	1.24	0.680		
39	1.33	0.670		
40	1.41	0.660		
41	1.49	0.650		
42	1.58	0.640		
43	1.66	0.630		
44	1.74	0.620		
45	1.83	0.610		
46	1.91	0.610		
47	1.99	0.600		
48	2.49	0.560		
49	2.99	0.530		
50	3.49	0.500		
51	3.99	0.480		
52	4.49	0.450		
53	4.99	0.430		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW17S1

CLIENT:	HEXCEL CORPORATION	DATE:	27-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-17
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.020 ft
AQUIFER:	Endless	THICKNESS:	6.98 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.830 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.03573square ft/min

CONDUCTIVITY: 0.00512 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.83		
2	0.00660	1.80		
3	0.0100	1.75		
4	0.0133	1.72		
5	0.0167	1.68		
6	0.0200	1.65		
7	0.0233	1.62		
8	0.0267	1.60		
9	0.0300	1.63		
10	0.0467	1.45		
11	0.0633	1.33		
12	0.0800	1.24		
13	0.0967	1.16		
14	0.113	1.09		
15	0.130	1.04		
16	0.146	0.990		
17	0.163	0.960		
18	0.180	0.920		
19	0.196	0.900		
20	0.213	0.870		
21	0.230	0.850		
22	0.246	0.840		
23	0.263	0.820		

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.800		
25	0.296	0.790		
26	0.313	0.770		
27	0.330	0.770		
28	0.413	0.710		
29	0.496	0.670		
30	0.580	0.640		
31	0.663	0.610		
32	0.746	0.580		
33	0.830	0.560		
34	0.913	0.540		
35	0.996	0.510		
36	1.08	0.490		
37	1.16	0.480		
38	1.24	0.460		
39	1.33	0.440		
40	1.41	0.420		
41	1.49	0.410		
42	1.58	0.400		
43	1.66	0.390		
44	1.74	0.370		
45	1.83	0.360		
46	1.91	0.350		
47	1.99	0.340		
48	2.49	0.280		
49	2.99	0.230		
50	3.49	0.190		
51	3.99	0.160		
52	4.49	0.130		
53	4.99	0.110		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW18S1

CLIENT:	HEXCEL CORPORATION	DATE:	13-MAR-63
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-18
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	8.420 ft
AQUIFER:	Endless	THICKNESS:	5.58 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.160 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.04883square ft/min

CONDUCTIVITY: 0.00875 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.16		
2	0.00660	2.16		
3	0.0100	2.14		
4	0.0133	2.12		
5	0.0167	2.10		
6	0.0200	2.09		
7	0.0233	2.08		
8	0.0267	2.07		
9	0.0300	2.06		
10	0.0467	2.01		
11	0.0633	1.99		
12	0.0800	1.90	1.70	10.28
13	0.0967	1.88	1.67	11.00
14	0.113	1.83	1.64	10.24
15	0.130	1.78	1.61	9.41
16	0.146	1.74	1.58	9.04
17	0.163	1.71	1.55	9.14
18	0.180	1.67	1.52	8.67
19	0.196	1.63	1.49	8.15
20	0.213	1.58	1.46	6.98
21	0.230	1.54	1.44	6.32
22	0.246	1.52	1.41	6.83
23	0.263	1.48	1.39	6.07

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.45	1.36	5.89
25	0.296	1.41	1.33	5.00
26	0.313	1.38	1.31	4.71
27	0.330	1.34	1.29	3.67
28	0.413	1.16	1.17	-1.41
29	0.496	1.02	1.07	-5.12
30	0.580	0.890	0.977	-9.81
31	0.663	0.790	0.890	-12.75
32	0.746	0.700	0.811	-15.99
33	0.830	0.630	0.740	-17.47
34	0.913	0.570	0.674	-18.33
35	0.996	0.520	0.614	-18.23
36	1.08	0.470	0.560	-19.23
37	1.16	0.430	0.510	-18.78
38	1.24	0.400	0.465	-16.39
39	1.33	0.370	0.424	-14.69
40	1.41	0.340	0.386	-13.76
41	1.49	0.320	0.352	-10.16
42	1.58	0.300	0.321	-7.11
43	1.66	0.280	0.292	-4.59
44	1.74	0.260	0.266	-2.67
45	1.83	0.240	0.243	-1.38
46	1.91	0.230	0.221	3.57
47	1.99	0.210	0.202	3.74
48	2.49	0.140	0.115	17.20
49	2.99	0.100	0.0664	33.53
50	3.49	0.0700		
51	3.99	0.0400		
52	4.49	0.0200		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW19S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-19
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.300 ft
AQUIFER:	Endless	THICKNESS:	6.70 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.170 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01859square ft/min

CONDUCTIVITY: 0.00277 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.17		
2	0.00660	2.14		
3	0.0100	2.11		
4	0.0133	2.08		
5	0.0167	2.07		
6	0.0200	2.04		
7	0.0233	2.02		
8	0.0267	1.99		
9	0.0300	1.99		
10	0.0467	1.87		
11	0.0633	1.77		
12	0.0800	1.67		
13	0.0967	1.55		
14	0.113	1.48		
15	0.130	1.40		
16	0.146	1.31		
17	0.163	1.23		
18	0.180	1.17		
19	0.196	1.13		
20	0.213	1.10		
21	0.230	1.07		
22	0.246	1.05	0.958	8.76
23	0.263	1.03	0.955	7.23

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	1.02	0.952	6.57
25	0.296	1.01	0.950	5.89
26	0.313	1.00	0.947	5.20
27	0.330	0.990	0.945	4.50
28	0.413	0.950	0.933	1.78
29	0.496	0.920	0.920	-0.0872
30	0.580	0.900	0.908	-0.970
31	0.663	0.880	0.896	-1.90
32	0.746	0.860	0.885	-2.91
33	0.830	0.850	0.873	-2.75
34	0.913	0.840	0.861	-2.61
35	0.996	0.820	0.850	-3.74
36	1.08	0.810	0.839	-3.64
37	1.16	0.800	0.828	-3.56
38	1.24	0.780	0.817	-4.82
39	1.33	0.770	0.806	-4.79
40	1.41	0.760	0.796	-4.78
41	1.49	0.750	0.785	-4.78
42	1.58	0.750	0.775	-3.41
43	1.66	0.740	0.765	-3.43
44	1.74	0.730	0.755	-3.47
45	1.83	0.720	0.745	-3.53
46	1.91	0.710	0.735	-3.61
47	1.99	0.710	0.726	-2.25
48	2.49	0.670	0.670	-0.109
49	2.99	0.640	0.619	3.18
50	3.49	0.610	0.572	6.15
51	3.99	0.580	0.528	8.81
52	4.49	0.560		
53	4.99	0.540		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW20S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-20
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.280 ft
AQUIFER:	Endless	THICKNESS:	6.72 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.390 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.01106square ft/min

CONDUCTIVITY: 0.00165 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.39		
2	0.00660	2.39		
3	0.0100	2.39		
4	0.0133	2.38		
5	0.0167	2.37		
6	0.0200	2.37		
7	0.0233	2.38		
8	0.0267	2.36		
9	0.0300	2.36		
10	0.0467	2.34		
11	0.0633	2.31		
12	0.0800	2.30		
13	0.0967	2.28	2.14	6.02
14	0.113	2.26	2.13	5.49
15	0.130	2.25	2.12	5.38
16	0.146	2.23	2.12	4.83
17	0.163	2.22	2.11	4.71
18	0.180	2.20	2.10	4.15
19	0.196	2.19	2.10	4.02
20	0.213	2.18	2.09	3.88
21	0.230	2.17	2.08	3.75
22	0.246	2.15	2.08	3.16
23	0.263	2.14	2.07	3.02

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	2.13	2.06	2.87
25	0.296	2.12	2.06	2.73
26	0.313	2.11	2.05	2.57
27	0.330	2.10	2.04	2.42
28	0.413	2.04	2.01	1.14
29	0.496	1.99	1.98	0.265
30	0.580	1.94	1.95	-0.687
31	0.663	1.90	1.92	-1.18
32	0.746	1.85	1.89	-2.27
33	0.830	1.81	1.86	-2.88
34	0.913	1.78	1.83	-2.95
35	0.996	1.74	1.80	-3.66
36	1.08	1.70	1.77	-4.42
37	1.16	1.68	1.74	-3.99
38	1.24	1.64	1.71	-4.84
39	1.33	1.61	1.69	-5.11
40	1.41	1.58	1.66	-5.41
41	1.49	1.55	1.63	-5.75
42	1.58	1.52	1.61	-6.13
43	1.66	1.49	1.58	-6.56
44	1.74	1.47	1.56	-6.30
45	1.83	1.44	1.53	-6.80
46	1.91	1.42	1.51	-6.59
47	1.99	1.40	1.48	-6.40
48	2.49	1.27	1.35	-6.60
49	2.99	1.19	1.23	-3.39
50	3.49	1.12	1.11	0.165
51	3.99	1.06	1.01	4.13
52	4.49	1.01	0.923	8.56
53	4.99	0.970	0.839	13.47

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW21S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-21
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.540 ft
AQUIFER:	Endless	THICKNESS:	6.46 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	1.760 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.14089square ft/min

CONDUCTIVITY: 0.02181 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	1.76		
2	0.00660	1.71		
3	0.0100	1.65		
4	0.0133	1.61		
5	0.0167	1.56		
6	0.0200	1.52		
7	0.0233	1.48		
8	0.0267	1.44		
9	0.0300	1.39		
10	0.0467	1.21		
11	0.0633	1.06		
12	0.0800	0.930		
13	0.0967	0.800		
14	0.113	0.690		
15	0.130	0.600		
16	0.146	0.500		
17	0.163	0.430	0.184	57.12
18	0.180	0.370	0.178	51.65
19	0.196	0.310	0.173	44.02
20	0.213	0.270	0.168	37.64
21	0.230	0.230	0.163	28.98
22	0.246	0.200	0.158	20.77
23	0.263	0.180	0.153	14.59

* HERITAGE REMEDIATION/ENGINEERING *

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	0.150	0.149	0.578
25	0.296	0.140	0.144	-3.33
26	0.313	0.130	0.140	-7.97
27	0.330	0.110	0.136	-23.79
28	0.413	0.0700	0.117	-67.16
29	0.496	0.0600	0.100	-67.61
30	0.580	0.0500	0.0864	-72.86
31	0.663	0.0400	0.0742	-85.68
32	0.746	0.0400	0.0638	-59.58
33	0.830	0.0300	0.0548	-82.87
34	0.913	0.0300	0.0471	-57.14
35	0.996	0.0300	0.0405	-35.06
36	1.08	0.0300	0.0348	-16.08
37	1.16	0.0200	0.0299	-49.62
38	1.24	0.0200	0.0257	-28.59
39	1.33	0.0200	0.0221	-10.52
40	1.41	0.0200	0.0190	5.01
41	1.49	0.0200	0.0163	18.37
42	1.58	0.0200	0.0140	29.84
43	1.66	0.0200	0.0120	39.71
44	1.74	0.0100	0.0103	-3.62
45	1.83	0.0100	0.00891	10.94
46	1.91	0.0100	0.00765	23.47
47	1.99	0.0100	0.00658	34.22
48	2.49	0.0100		
49	2.99	0.0100		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE

DATA SET: CW22S1

CLIENT:	HEXCEL CORPORATION	DATE:	26-SEPT-90
LOCATION:	LODI, NEW JERSEY	WELL NO.:	CW-22
COUNTY:	BERGEN COUNTY	WELL DEPTH:	14.00 ft
PROJECT:	Well Slug Test Data	WATER TABLE:	7.110 ft
AQUIFER:	Endless	THICKNESS:	6.89 ft
INTAKE RADIUS:	0.170 ft	CASING RADIUS:	0.170 ft
SCREEN TOP:	9.000 ft	SCREEN BASE:	14.00 ft
INITIAL HEAD:	2.170 ft	TRANS. RATIO:	1.0000

MODEL PARAMETERS:

TRANSMISSIVITY: 0.00268square ft/min

CONDUCTIVITY: 0.00039 ft/min

MODEL TYPE: UNCONFINED PARTIALLY PENETRATED AQUIFER (Bouwer & Rice)

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
1	0.00330	2.17		
2	0.00660	2.16		
3	0.0100	2.15		
4	0.0133	2.15		
5	0.0167	2.15	2.12	1.36
6	0.0200	2.15	2.12	1.37
7	0.0233	2.14	2.12	0.927
8	0.0267	2.14	2.11	0.941
9	0.0300	2.14	2.11	0.955
10	0.0467	2.13	2.11	0.562
11	0.0633	2.12	2.11	0.163
12	0.0800	2.13	2.11	0.703
13	0.0967	2.12	2.11	0.306
14	0.113	2.11	2.11	-0.0949
15	0.130	2.11	2.11	-0.0234
16	0.146	2.11	2.10	0.0479
17	0.163	2.11	2.10	0.118
18	0.180	2.10	2.10	-0.285
19	0.196	2.10	2.10	-0.213
20	0.213	2.10	2.10	-0.142
21	0.230	2.10	2.10	-0.0708
22	0.246	2.09	2.09	-0.477
23	0.263	2.09	2.09	-0.406

No.	TIME (mins)	Head, H (ft) DATA	SYNTHETIC	DIFFERENCE (percent)
24	0.280	2.09	2.09	-0.334
25	0.296	2.09	2.09	-0.263
26	0.313	2.09	2.09	-0.191
27	0.330	2.09	2.09	-0.120
28	0.413	2.07	2.08	-0.727
29	0.496	2.07	2.07	-0.369
30	0.580	2.06	2.07	-0.498
31	0.663	2.05	2.06	-0.628
32	0.746	2.04	2.05	-0.762
33	0.830	2.04	2.04	-0.403
34	0.913	2.03	2.04	-0.539
35	0.996	2.02	2.03	-0.677
36	1.08	2.02	2.02	-0.319
37	1.16	2.01	2.01	-0.459
38	1.24	2.01	2.01	-0.102
39	1.33	2.00	2.00	-0.244
40	1.41	1.99	1.99	-0.390
41	1.49	1.98	1.99	-0.537
42	1.58	1.98	1.98	-0.180
43	1.66	1.97	1.97	-0.330
44	1.74	1.97	1.96	0.0265
45	1.83	1.96	1.96	-0.126
46	1.91	1.96	1.95	0.230
47	1.99	1.95	1.94	0.0754
48	2.49	1.91	1.90	0.141
49	2.99	1.88	1.86	0.694
50	3.49	1.85	1.82	1.21
51	3.99	1.83		
52	4.49	1.80		
53	4.99	1.77		

CURRENT RESOLUTION MATRIIX NOT AVAILABLE