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SDMS Document
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EBASCO

March 20, 1990

Ms. Janet Feldstein
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278

SUBJECT: **REM III PROGRAM - EPA CONTRACT NO. 68-01-7250**
WORK ASSIGNMENT NO. 11-2665.0
SCIENTIFIC CHEMICAL PROCESSING SITE
VALIDATED DATA FOR EBASCO
SPLIT SAMPLING FROM OFF-SITE WELLS AND ON-SITE
BEDROCK WELL, DURING THE DAMES & MOORE
FIELD INVESTIGATION PER POP REVISIONS 8 & 9

Dear Janet:

Enclosed are summary tables of the subject data. Since you indicated that you would have Dames & Moore do the comparative analysis we have not done any independent analysis. This is the complete set of data for Ebasco's split sampling activities, which includes groundwater sampling from Dames & Moore off-site water table and till aquifer wells and one on-site bedrock well, and selected soil sampling from these wells. One soil sample from till well MW-12D (Case 11256 Sample # BY 555-VOA's only) and one field blank (BY 554) were noted as "not received" by the lab so these data are not shown in the summary. Two figures from the Dames & Moore POP showing the proposed well locations are also enclosed. The wells have been identified in these Figures according to our site log-book. The validated raw data packages are available in our office if you should require them.

If you have any questions or comments please feel free to call me at (201) 460-6502 or Kathy DiAntonio at (201) 460-6578.

Very truly yours,

Hsin H Yeh

Hsin H. Yeh, Ph.D., P.E.
Site Manager

KDiA/ew

cc: K. DiAntonio
File

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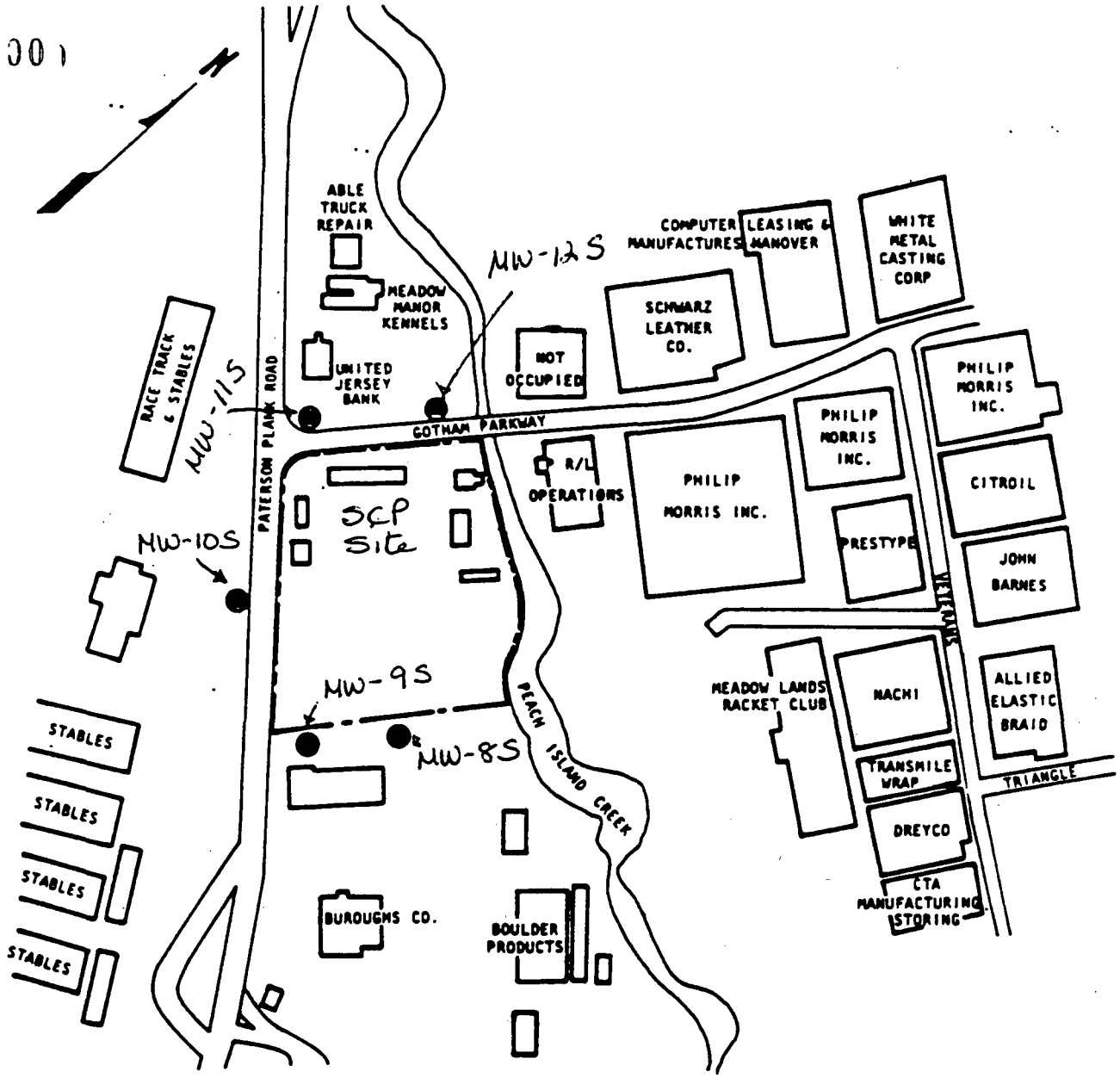

PROPOSED
OFF-SITE WELL LOCATIONS
WATER TABLE AQUIFER

SCP SITE

CARLSTADT, N.J.

0 . 500 FEET
(APPROXIMATE)

KEY:

● PROPOSED SHALLOW WELL LOCATIONS

Dames & Moore

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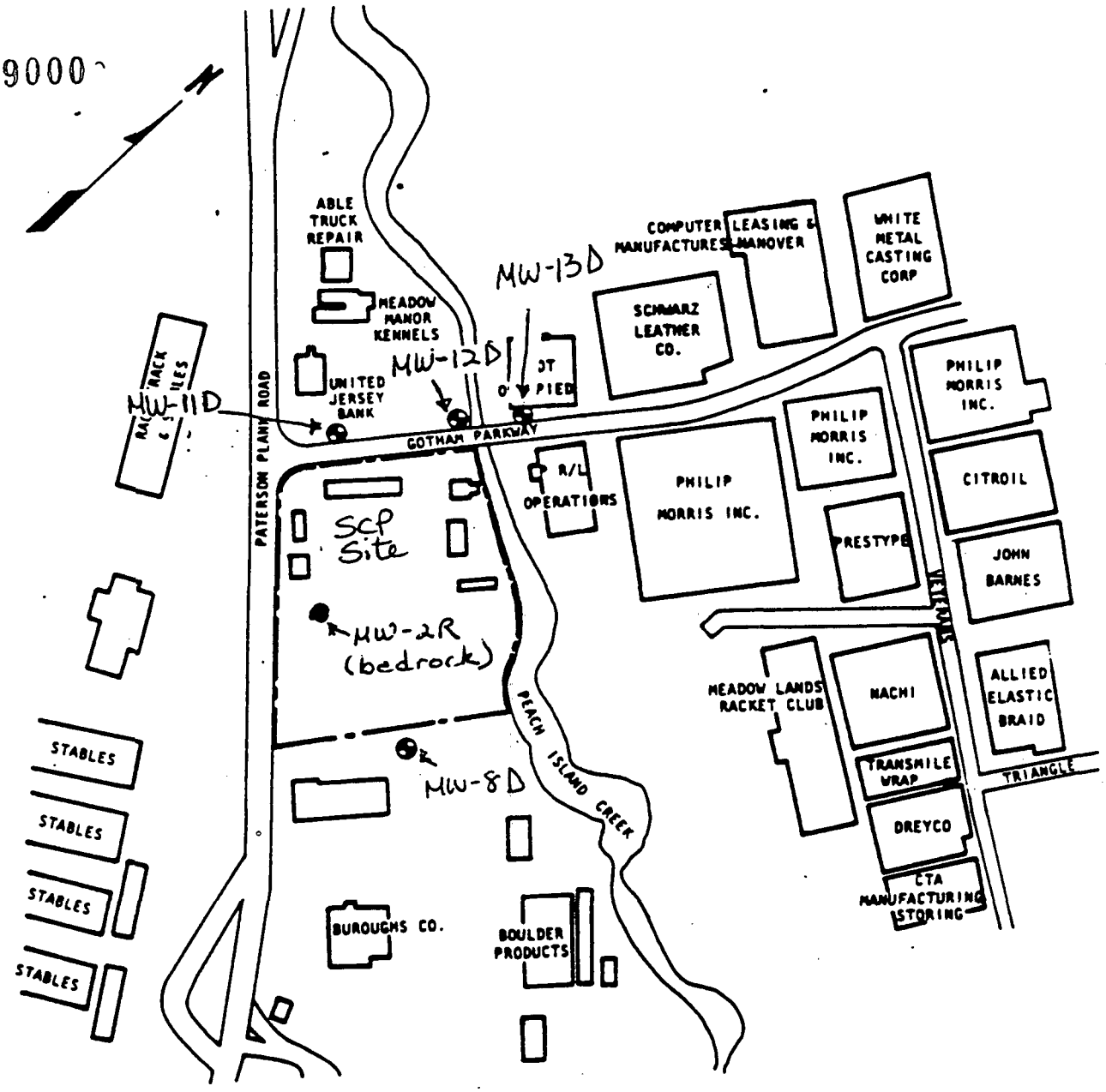
FIGURE 7-8



PROPOSED
OFF-SITE WELL LOCATIONS
TILL AQUIFER

SCP SITE
CARLSTADT, N.J.

0 500 FEET
(APPROXIMATE)

KEY:

● PROPOSED DEEP WELL LOCATIONS

Dames & Moore

FIGURE 7-9

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OFF-SITE GROUNDWATER SAMPLE DATA - WATER TABLE AQUIFER (SHALLOW)

	MW-8S	MW-9S	MW-10S	MW-11S	MW-12S	Field Blank	Trip Blank	Deionized Water
Volatile Organics ug/l		ND	ND			ND	ND	ND
Trichloroethene	320				5			
Hexane (TIC)					18 JN			
Acetone	100			15 J				
Unknown (TIC)								
Vinyl Chloride	360			11 JN				
1,2-Dichloroethene	1400							
Semivolatile Organics (ug/l)			ND	ND		ND		ND
2-Methylnaphthalene		5 J						
Napthalene		2 J						
Fluorene		4 J						
Acenaphthalene		7 J						
Dibenzofuran		4 J						
Phenathrene		3 J						
Substituted benzene(s) (TIC)		35.5 J (total)						
Unknown ketone (TIC)					10 JN			
Unknown (TIC)	192 J (total)				8.3 JN			
PCB/Pesticide								
Alpha-BHC	0.37 N	ND	ND	ND	ND	ND		ND
Alpha-BHC	0.18 N							
Inorganics (ug/l)								
Aluminum	1730.0 J	7250.0	10400.0	21300.0	3870.0	132.0 B		
Arsenic	9.2 B	5.6 B	9.7 B	7.7 B	2.4 B			
Barium	354.0	582.0	678.0	254.0	52.4 B			
Beryllium								
Cadmium								
Calcium	157000.0	133000.0	335000.0	138000.0	56900.0	121.0 B		121.0 B
Chromium		36.3	51.3	68.7				
Cobalt			8.2 B	12.7				
Copper	96.5	36.1	45.7	73.7	10.0 B			
Iron	1870.0	25300.0	14600.0	23000.0	4560.0	144.0		
Lead	62.5	45.4	142.0	103.0	2.3 B			
Magnesium	99900.0	55000.0	133000.0	34300.0	14400.0			
Manganese	3660.0	5920.0	1430.0	3750.0	1200.0	4.4 B		
Mercury	1.7	1.8	0.6	2.9				
Nickel	21.8 B	17.2 B	36.2 B	36.2 B				
Potassium	28500.0	42800.0	30400.0	10000.0	18700.0			
Sodium	712000.0	379000.0	49500.0	45900.0	36100.0			
Vanadium		16.3 B	32.5 B	42.6 B	10.8 B			
Zinc	83.2	79.5	332.0	161.0	7.9 B			

J = estimated value
N = presumptive evidence of the presence of the compound
B = detected in blank

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OFF-SITE GROUNDWATER SAMPLE DATA - WATER TABLE AQUIFER (SHALLOW)

	MW-8S	MW-9S	MW-10S	MW-11S	MW-12S	Field Blank	Trip Blank	Deioniz Water
VOA (for MW-8S) Cont'd								
1,1-Dichloroethene	8 J							
1,1-Dichloroethane	29							
Tetrachloroethene	12 J							
Toluene	7 J							
TICs (for MW-8S)								
1,4-Dioxane	60 J							
Acidity (mg/l)	<10	<10	<10	NA	<10			
Alkalinity (mg/l)	674	609	896	NA	130			
Chloride (mg/l)	956	612	943	NA	226			
Total Dissolved Solids (mg/l)	2540	1610	2880	NA	382			
Sulfate (mg/l)	200	9.5	350	NA	260			
Total Petroleum Hydrocarbons (mg/l)	<1	<1	<1	<1	<1			

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OFF-SITE GROUNDWATER SAMPLE DATA - TILL AQUIFER (DEEP)

	MW-8D (use shallow data field blank)	MW-11D	MW-12D	MW-13D	Trip Blank
Volatile Organics ug/l					
Methylene Chloride		2 J		4 J (benzene)	ND
1,2-Dichloroethene	9	75	110 J	1000	
Trichloroethene	11	280	12000	1300	
Toluene	1 J		970	4 J	
1,1-Dichloroethene		4 J	560	99	
1,1-Dichloroethane			100 J	30	
Chloroform		3 J	85 J	230	
Acetone			420 J	6 J (Chlorobenzene)	
Tetrachloroethene		110	720	260	
Total Xylenes			510		
1,1,1-Trichloroethane		13	520	160	
1,2-Dichloroethane				89	
Semivolatiles (ug/l)	ND				
Unknown		212J (total)	576J (total)	357J (total)	
PCB/Pesticides (ug/l)					
Alpha-BNC		0.17 N	.081 N	0.32 N	
Gamma-BNC		0.05 N			
4,4 - DDT		0.34	0.35	0.80	
Inorganic (ug/l)					
Zinc	45.8		15.6 B		
Aluminum	6540.0	1280.0 J	2980.0 J	2990.0	
Arsenic	6.4 B				
Barium	70.3 B	163.0 B	379.0	213.0	
Calcium	168000.0	21100.0	381000.0	333000.0	
Chromium	10.2		29.2 J	Cobalt - 9.0 B	
Copper	16.2 B	28.3 J	25.2 J	43.3 J	
Iron	9470.0	979.0	2430.0	8180.0	
Lead	5.7				
Magnesium	20800.0	7630.0	2360.0 B	26700.0	
Manganese	230.0	27.2 J	56.0	2950.0	
Nickel	19.6 B			Mercury - 1.2	
Potassium	5660.0	7100.0	20400.0	6600.0	
Sodium	91600.0	72500.0	224000.0	126000.0	
Vanadium	27.0 B	Mercury - 1.5	Mercury - 1.2	25.5 B	
				Selenium - 8.7 J	

	MW-8D	MW-8DR	MW-11D	MW-12D	MW-13D
Acidity (mg/l)	<10	<10	<10	<10	<10
Alkalinity (mg/l)	48.2	53.3	234	631	141
Chloride (mg/l)	231	228	137	496	287
Total Dissolved Solids (mg/l)	991	975	754	1570	901
Sulfate (mg/l)	350	350	200	39	260
Total Petroleum Hydrocarbons (mg/l)	<1	<1	<1	<1	<1

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ON-SITE GROUNDWATER SAMPLE DATA - BEDROCK AQUIFER

	MW-2R (2/89 sample) use shallow well field blank	MW-2R (4/89 sample)	Trip Blank (4/89)
Volatile Organics (ug/l)			
Vinyl Chloride	14 J	56	
Methylene Chloride	21 J		11 J
Chloroform	830	540	
1,2-Dichloroethane	380	460	
Trichloroethene	180	310 J	
Toluene	15 J		1 BJ
1,2-Dichloroethene		3 J	
1,1-Dichloroethene		2 J	
1,1,1-Trichloroethane		8 J	
Tetrachloroethene		2 J	
Semivolatile Organics (ug/l)		ND	
Unknown phenol	16 J		
Unknown alcohol	11 J		
PCB/Pesticide	ND	ND	
Inorganics (ug/l)			
Zinc	7.8 B	(no inorganic sample taken)	
Aluminum	863.0		
Arsenic	ND		
Barium	142.0 B		
Beryllium			
Cadmium			
Calcium	209000.0		
Chromium	27.6		
Copper	52.3		
Lead	2.6 B		
Magnesium	1380.0 B		
Potassium	31000.0		
Sodium	60500.0		
Vanadium	7.0 B		
Acidity (mg/l)	<10		
Alkalinity (mg/l)	161		
Chloride (mg/l)	232		
Total Dissolved Solids (mg/l)	1160		
Sulfate (mg/l)	380		
Total Petroleum Hydrocarbons (mg/l)	<1		

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OFF-SITE AND ON-SITE BEDROCK WELLS - SOIL DATA

	MW-11D 12'-14'	Field Blank	MW-2R 20'-24'	MW-2R 28'-32'	Field Blank
Volatile Organics (ug/kg)					
Chloroform			120000.	310.	
Acetone	30 J		47000.0 B	510 (1,2-dichloroethene)	15 B
Trichloroethene	120 J		10000.	26.	6 J (butanone)
Tetrachloroethene	22 J				
Chlorobenzene	4 J				3 J (xylenes)
Ethylbenzene	2 J				
Methylene Chloride		5 BJ	18000.0		7
Toluene		0.8 J		100. J (TIC - acetic acid)	9 J
TICs			5000. J (unknown alkane)	30.J (unknown alkane)	9 J (acetic acid) 6 J (alkane
Semivolatile Organics (ug/kg)					
Diethylphthalate				420 J	
Di-n-butylphthalate			150 J	2100 J	
Butylbenzylphthalate				200 J	
bis(2-ethylhexyl)phthalate		5 BJ			3 J
TICs					
1-3 - Dioxolane	2000 J				
1-methylethylbenzene	700 J				
Propanoic acid			400 J		
Unknown	700 J		900 J	46,700 J (total)	80 J
PCB/Pesticides (ug/kg)	ND	4,4'-DDT-0.044 BJ	ND	ND	ND
Inorganic (mg/kg)					
Aluminum	19700.0		7840.0	4290.0	134.0 B
Arsenic	5.8 NJ				
Barium	182.0	2.1 B	123.0 J		
Beryllium	0.88 B		2.8 J	1.6 J	
Cadmium			0.75 B	0.46 B	
Calcium	3550.0	108 B	18400.0	14200.0	336.0 B
Chromium	29.4		12.4 J	6.8 J	2.2 B
Cobalt	16.6		7.3 B	4.2 B	
Copper	51.9		9.9 J	6.5 J	5.5 J
Iron	43500.0	295.0	12400.0	6265.0	
Lead	14.3	2.1B	5.6 J	4.9 J	
Magnesium	9640.0		5840.0	3430.0	
Manganese		9.8 B	379.0	239.0	
Mercury					

OFF-SITE AND ON-SITE BEDROCK WELLS - SOIL DATA

	MW-11D 12'-14'	Field Blank	MW-2R 20'-24'	MW-2R 28'-32'	Field Blank
Nickel	35.2		17.5 J	13.0 J	
Potassium	2350.0		1690.0 J	9540.0 BJ	
Vanadium	38.9		18.6 J	10.8	
Zinc	91.7	16.9 B	37.3	22.8 J	18.7 B
Sodium	1020.0 B	284 B			1820.0 B
Total Petroleum Hydrocarbons (mg/kg)			<30.8	174.1	<33.5

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