START 0018611 93

JAN 15 1992 Sta. 21

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 133108

2. To: (Receiving Organization) Distribution	3. From: (Originating Organization) Environmental Engineering Group
4. Related EDT No: N/A	
5. Proj/Prog/Dept/Div: ER	6. Cog/Proj Engr: S. J. Trent
7. Purchase Order No: N/A	
8. Originator Remarks: Approval/Release	
9. Equip/Component No: N/A	
10. System/Bldg/Facility: N/A	
11. Receiver Remarks:	
12. Major Assm Dwg No: N/A	
13. Permit/Permit Application No. N/A	
14. Required Response Date: 1/3/92	

JAN 1992 RECEIVED EDMC

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev No.	(E) Title or Description of Data Transmitted	(F) Impact Level	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	WHC-SD-EN-DP-019	N/A	0	U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study	4	1,6	1	

16. KEY

Impact Level (F)	Reason for Transmittal (G)	Disposition (H) & (I)
1, 2, 3, or 4 see MRP 5.43 and EP-1.7	1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Impact Level for required signatures)

(G) Reason	(H) Disp	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp
1	1	Cog./Proj. Eng S. J. Trent (3)		1/9/92	H4-56						
1	1	Cog./Proj. Eng. Mgr. R. A. Carlson	RACarlson	1/9/92	H4-55						
		QA N/A									
		Safety N/A									
1	1	C. D. Wittreich		1/9/92	H4-55						
3		EDMC, J. Jorning (2)			H4-22						
3		Clearance, M. Gonzales			H4-17						

18. S. J. Trent 1/9/92 Signature of EDT Originator Date	19. Authorized Representative for Receiving Organization Date	20. RACarlson 1/9/92 R. A. Carlson Cognizant/Project Engineer's Manager Date	21. DOE APPROVAL (if required) Ltr No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments

BD-7400-172 (2/89)

SUPPORTING DOCUMENT

1. Total Pages ~~90~~ 89

2. Title	3. Number	4. Rev No.
U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study	WHC-SD-EN-DP-019	0

5. Key Words

APPROVED FOR PUBLIC RELEASE

6. ~~Author~~ REQUESTOR

Name: S. J. Trent

S J Trent 1/9/92

Signature

Organization/Charge Code 81232/PH22A

7. Abstract

1/14/92 N. Solis

WHC, 1991, *U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study*, WHC-SD-EN-DP-019, Rev. 0, prepared by M. A. Chamness, S. S. Teel, A. W. Pearson, K. R. O. Barton, R. W. Fruland, and R. E. Lewis, Pacific Northwest Laboratory, for Westinghouse Hanford Company, Richland, Washington.

8. PURPOSE AND USE OF DOCUMENT - This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform, direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed.

PATENT STATUS - This document copy, since it is transmitted in advance of patent clearance, is made available in confidence solely for use in performance of work under contracts with the U.S. Department of Energy. This document is not to be published nor its contents otherwise disseminated or used for purposes other than specified above before patent approval for such release or use has been secured, upon request, from the U.S. Department of Energy, Patent Attorney, Richland Operations Office, Richland, WA.

DISCLAIMER - This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

9. Impact Level 4

10. Authorized Manager's Name

R. A. Carlson

RACarlson 1/9/92

Authorized Manager's Signature

Specify Distribution Limit EXTERNAL

11. RELEASE STAMP

OFFICIAL RELEASE BY WHC (20)

DATE JAN 15 1992

Sta. 21

9413203.0003

A-6400-073 (7/90) (EF) WEF124
Supporting Document (Cover Sheet)

INTRODUCTION

This data package includes all the geologic information requested by the Westinghouse Hanford Company for the U Plant aggregate area. Two tables present a listing of all the boreholes within the 200-West Area as defined by the Westinghouse Hanford Company and amended by the Pacific Northwest Laboratory. One table lists all the types of geologic data (driller's log, geologist log, sieve, $CaCO_3$ content, moisture, and chemical analyses) available for each well at the Pacific Northwest Laboratory. The other table summarizes the well construction history for each of these wells. In addition, 15 as-built diagrams are provided for a subset of these wells designated by WHC.

9413273.0004

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W14-7	D	Y	Y			Y	
2-W14-63	D	Y	YL			Y	
2-W18-15	D	Y	Y	Y	Cs, Pu	Y	PNL Files
2-W18-18	D					Y	
2-W18-19	D					Y	
2-W18-20	D					Y	
2-W18-25	G,D					Y	
2-W18-27	G,D					Y	
2-W18-28	G,D					Y	
2-W18-29	G,D					Y	
2-W18-30	G,D					Y	
2-W18-31	G,D					Y	
2-W18-51	D						
2-W18-52	D						
2-W18-53	D						
2-W18-54	D						
2-W18-55	D						
2-W18-90	D						
2-W18-91	D						
2-W18-92	D						
2-W18-100	D	YL	YL			Y	
2-W18-101	D					Y	
2-W18-102	D	YL	YL			Y	
2-W18-103	D	YL	YL			Y	
2-W18-104	D	YL	YL			Y	
2-W18-105	D	YL	YL			Y	
2-W18-109	D	YL	YL			Y	
2-W18-110	D	YL	YL			Y	
2-W18-113	D	YL	YL		field rad in logs	Y	PNL Files
2-W18-114	D					Y	
2-W18-115	D	YL	YL			Y	
2-W18-116	D				field rad in logs	Y	PNL Files

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W18-117	D	YL	YL			Y	
2-W18-118	D					Y	
2-W18-119	D	YL	YL			Y	
2-W18-120	D					Y	
2-W18-121	D					Y	
2-W18-122	D					Y	
2-W18-123	D	YL	YL			Y	
2-W18-124	D	YL	YL			Y	
2-W18-125	D	YL	YL			Y	
2-W18-126	D	YL	YL			Y	
2-W18-127	D	YL	YL			Y	
2-W18-128	D	YL	YL			Y	
2-W18-129	D	YL	YL			Y	
2-W18-130	D	YL	YL			Y	
2-W18-131	D	YL	YL			Y	
2-W18-132	D	YL	YL			Y	
2-W18-133	D	YL	YL			Y	
2-W18-134	D					Y	
2-W18-135	D	YL	YL			Y	
2-W18-136	D	YL	YL			Y	
2-W18-137	D	YL	YL			Y	
2-W18-138	D	YL	YL				
2-W18-139	D	YL	YL			Y	
2-W18-140	D					Y	
2-W18-141	D	YL	YL			Y	
2-W18-142	D	YL	YL			Y	
2-W18-143	D	YL	YL			Y	
2-W18-144	D	YL	YL			Y	
2-W18-145	D	YL	YL			Y	
2-W18-146	D					Y	
2-W18-147	D	YL	YL			Y	
2-W18-148	D	YL	YL			Y	

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W18-176	D					Y	
2-W18-177	D	YL	YL	Y	Pu, Am	Y	PNL Files
2-W18-178	G,D			Y	Pu, Am	Y	PNL Files
2-W18-186	G,D			Y	Pu, Am	Y	PNL Files
2-W18-187	G,D			Y	Pu, Am		PNL Files
2-W18-188	G,D			Y	Pu, Am	Y	PNL Files
2-W18-192	G,D			Y	Pu, Am	Y	PNL Files
2-W18-193	G			Y	Pu, Am	Y	PNL Files
2-W18-194	G,D			Y	Pu, Am	Y	PNL Files
2-W18-195	G				Pu, Am		PNL Files
2-W18-196	G,D				Pu, Am		PNL Files
2-W18-197	G,D				Pu, Am	Y	PNL Files
2-W18-198	G,D				Pu, Am	Y	PNL Files
2-W18-199	G,D					Y	
2-W18-200	G,D				Pu, Am	Y	PNL Files
2-W18-207	D					Y	
2-W18-208	G,D					Y	
2-W18-209	D					Y	
2-W18-210	G,D						
2-W18-211	D					Y	
2-W18-212	D					Y	
2-W18-213	G,D					Y	
2-W18-214	D					Y	
2-W18-215	D					Y	
2-W18-217	D					Y	
2-W18-218	G,D					Y	
2-W18-219	D					Y	
2-W18-220	G,D					Y	
2-W19-1	D	YL	YL			Y	
2-W19-2	D	YL	YL			Y	
2-W19-3	D	Y	Y			Y	
2-W19-4	D						

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W19-7	D	Y	Y			Y	
2-W19-8	D	YL	YL			Y	
2-W19-9	D						
2-W19-10	G,D						
2-W19-11	D	Y	YL			Y	
2-W19-12	D					Y	
2-W19-13	D	YL	YL			Y	
2-W19-14	D	YL	YL			Y	
2-W19-15	G,D	Y	YL	Y	GEA	Y	PNL Files
2-W19-16	G,D	Y		Y	GEA	Y	PNL Files
2-W19-17	G,D	Y				Y	
2-W19-18	G,D					Y	
2-W19-19	G,D	Y	Y	Y		Y	
2-W19-20	G,D	Y	Y			Y	
2-W19-21	G,D	Y	Y		Co,K,U,Ra,Cs,Th	Y	PNL Files
2-W19-22	G,D	Y	Y	Y		Y	
2-W19-23	G,D	Y	Y			Y	
2-W19-24	G,D	Y	Y			Y	
2-W19-25	G,D	Y	Y			Y	
2-W19-26	G,D	Y	Y			Y	
2-W19-27	G,D	Y	Y	Y	Co,K,U,Ra,Cs,Th	Y	SV,2909
2-W19-28	G,D	Y	Y			Y	
2-W19-29	G,D	Y	Y			Y	
2-W19-30	G,D	Y				Y	
2-W19-31	G,D					Y	
2-W19-32	G,D					Y	
2-W19-51							
2-W19-52							
2-W19-53	D						
2-W19-54	D						
2-W19-55	D						
2-W19-69	D	Y				Y	

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W19-70	D	Y	Y			Y	
2-W19-71	D	Y	Y			Y	
2-W19-72	D	Y				Y	
2-W19-73	D					Y	
2-W19-74	D	YL	YL			Y	
2-W19-75	D					Y	
2-W19-76	D	YL	YL			Y	
2-W19-89	G,D	Y		Y		Y	
2-W19-90	G,D	Y	Y	Y		Y	
2-W19-91	G,D	Y	Y	Y	Co,K,U,Ra,Cs,Th	Y	PNL Files
2-W19-92	G,D	Y	Y	Y	Co,K,U,Ra,Cs,Th	Y	PNL Files
2-W19-93	G,D	Y	Y	Y	Co,K,U,Ra,Cs,Th	Y	PNL Files
2-W21-51	D	Y					
2-W21-52	D	Y				Y	
2-W21-53	D	Y				Y	
2-W21-54	D	Y				Y	
2-W21-55	D	Y				Y	
2-W21-56	D	Y				Y	
2-W21-57	D	Y				Y	
2-W21-58	D	Y				Y	
2-W21-59	D	Y				Y	
2-W21-60	D	Y				Y	
2-W21-61	D	Y				Y	
2-W21-62	D	Y				Y	
2-W21-63	D	Y				Y	
2-W21-64	D	Y				Y	
2-W21-65	D	Y				Y	
2-W21-66	D	Y				Y	
2-W21-67	D	Y				Y	
2-W21-68	D	Y				Y	
2-W21-69	D	Y				Y	
2-W21-70	D	Y				Y	

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Well	Geologic logs	Sieved	CaCO3	Moisture	Chemistry	Archived	Source
2-W21-71	D	Y				Y	
2-W21-72	D	Y				Y	
2-W21-73	D	Y				Y	
2-W21-74	D	Y				Y	
2-W21-75	D	Y				Y	
2-W21-76	D	Y				Y	
2-W21-77	D					Y	
2-W21-78	D					Y	
2-W21-79	D					Y	
2-W21-80	D					Y	
2-W21-81	D					Y	
2-W21-82	D					Y	
2-W21-83	D					Y	
2-W22-22	D	Y	Y			Y	
2-W22-23	D	Y	Y			Y	
2-W22-24	D	Y	Y			Y	
2-W22-28	D	Y				Y	
2-W22-40	G,D	Y				Y	
2-W22-41	G,D	YL				Y	
2-W22-42	G,D	YL				Y	
2-W22-43	G,D	YL				Y	
2-W22-60	D					Y	
2-W22-73	G,D	Y	Y		field rad in logs	Y	PNL Files
2-W22-75	G,D	YL	YL		field rad in logs	Y	PNL Files
2-W23-4	D	YL	YL			Y	
2-W23-11	D	Y	YL			Y	
2-W23-13	G,D	Y	YL				
2-W23-14	G,D					Y	
2-W23-63							
2-W23-71	D						
2-W23-210	D						
2-W23-228	G			Y	Pu, Cs, Sr		PNL Files

SAMPLE DATA FOR U PLANT AGGREGATE AREA

Notes:							
Geologic and drillers logs are available at PNL, Sigma V, rm. 2606 or WHC, 450 Hills, rm							
Sieve and calcium carbonate data are available in ROCSAN and HEIS computer databases.							
D = Driller's logs							
G = Geologist's logs							
Y = Data available.							
YL = Data available, but there are gaps of 10 ft or more.							
Source = Location of moisture and chemistry data.							

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W14-7	100	531	0	20	09/16/76	09/30/76	677.69	40003	-75002
299-W14-63	29					04/30/82		41090	-74725
299-W18-15	248	243	170	243	03/12/80	04/28/80	660.76	36990	-77152
299-W18-18	265	204	185	210	08/03/81	09/15/81		38903	-76270
299-W18-18	265	204	215	225	08/03/81	09/15/81		38903	-76270
299-W18-18	265	204	183	204	08/03/81	09/15/81		38903	-76270
299-W18-19	250		220	250		06/30/82		38503	-76403
299-W18-20	250	250	220	249	06/29/82	08/31/82		38103	-76477
299-W18-25	215.35	214.8	193.5	214.8	11/08/89			37786	-76034
299-W18-51	151	152			10/17/44	10/31/44	666.74	37822	-75700
299-W18-52	150	151			11/07/44	11/30/44	664	38262	-75837
299-W18-53	150	151			11/06/44	11/30/44	664.93	38135	-75908
299-W18-54	150	150			10/24/44	10/31/44	665.96	38035	-75775
299-W18-55	150	151			11/03/44	11/30/44	664.84	37935	-75908
299-W18-90	100				06/22/70	06/30/70	664.62	37857	-75860
299-W18-91	100					06/30/70	664.1	37920	-75876
299-W18-92	100				06/17/70	06/30/70	665.04	37855	-75820
299-W18-100	125				08/29/74	09/30/74	667.74	37942	-75616
299-W18-101	125				06/28/73	07/31/73	665.98	37860	-75737
299-W18-102	125				07/14/73	07/31/73	666.05	37901	-75686
299-W18-103	125				06/08/73	06/30/73	664.94	37900	-75786
299-W18-104	125				05/23/74	06/30/74	667.43	37857	-75612
299-W18-105	125				06/18/73	06/30/73	665.92	37947	-75737
299-W18-109	125				05/03/74	04/30/74	665.95	37857	-75717
299-W18-110	125				05/16/74	05/31/74	665.65	37857	-75763
299-W18-113	125				06/26/74	07/31/74	664.63	37940	-75817
299-W18-114	105				01/12/76	01/31/76	665	38043	-75617
299-W18-115	125				03/06/74	03/31/74	666.1	37976	-75692
299-W18-116	105				01/21/76	01/31/76	665	38017	-75678
299-W18-117	125				04/24/74	05/31/74	666.47	38043	-75657
299-W18-118	105				01/22/76	01/31/76	665	37977	-75787
299-W18-119	125				05/06/74	05/31/74	664.64	38017	-75787
299-W18-120	105				01/27/76	02/28/76	665	38041	-75818
299-W18-121	105				02/09/76	02/28/76	665	37956	-75862
299-W18-122	120				01/29/74	02/28/74	664.25	37977	-75887

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W18-123	125				07/03/74	07/31/74	663.84	38017	-75887
299-W18-124	120				01/25/74	02/28/74	668.83	38077	-75687
299-W18-125	120				02/07/74	02/28/74	668.76	38117	-75687
299-W18-126	125				03/22/74	03/31/74	666.93	38143	-75637
299-W18-127	125				05/22/74	05/31/74	665.63	38047	-75722
299-W18-128	125				05/14/74	05/31/74	665	38047	-75757
299-W18-129	125				03/28/74	04/30/74	664.73	38077	-75787
299-W18-130	100				05/02/75	05/31/75		38117	-75787
299-W18-131	125				07/15/74	07/31/74	664.16	38051	-75857
299-W18-132	100				04/28/75	05/31/75	665	38077	-75885
299-W18-133	125				04/02/74	04/30/74	664.39	38117	-75885
299-W18-134	105				01/28/76	02/28/76	665	38141	-75857
299-W18-135	125				04/17/74	04/30/74	666.41	38177	-75690
299-W18-136	100				03/20/75	03/31/75	666	38217	-75687
299-W18-137	125				04/08/74	04/30/74	665.59	38244	-75717
299-W18-138	100				05/09/75	05/31/75	666	38164	-75707
299-W18-139	125				03/14/74	03/31/74	665.96	38151	-75757
299-W18-14	110				07/28/76	08/31/76	683	39370	-77210
299-W18-140	105				02/17/76	02/28/76	665	38186	-75778
299-W18-141	125				08/14/74	08/31/74	664.98	38217	-75787
299-W18-142	100				03/17/75	03/31/75	665	38244	-75757
299-W18-143	100				03/11/75	03/31/75	665	38244	-75817
299-W18-144	125				03/22/74	04/30/74	664.56	38151	-75822
299-W18-145	125				04/22/74	05/31/74	664.38	38177	-75885
299-W18-146	100				03/26/75	04/30/75	665	38217	-75885
299-W18-147	125				08/22/74	08/31/74	664.13	38244	-75857
299-W18-148	120				02/06/74	02/28/74	666.86	37857	-75657
299-W18-176	75					09/30/77		38074	-75698
299-W18-177	89	87				03/31/80		37680	-75500
299-W18-178	77					03/31/80		38610	-76240
299-W18-186	22					02/28/81		37270	-76685
299-W18-187	21					02/28/81		37425	-76535
299-W18-188	20					02/28/81		38065	-76413
299-W18-192	20					02/28/81		38792	-76258
299-W18-193	20					02/28/81		38786	-76235

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W18-194	20					03/31/81		39010	-76133
299-W18-195	13					04/30/81		37275	-76710
299-W18-196	12					03/31/81		36880	-77065
299-W18-197	14					03/31/81		37095	-76405
299-W18-198	14					03/31/81		38362	-76363
299-W18-199	12					03/31/81		38366	-76335
299-W18-200	12					03/31/81		38976	-76070
299-W18-207	17					05/31/81		39145	-76148
299-W18-208	20					05/31/81		39032	-76207
299-W18-209	16					05/31/81		38898	-76270
299-W18-210	20					05/31/81		38798	-76319
299-W18-211	17					05/31/81		38715	-76338
299-W18-212	16					05/31/81		38645	-76355
299-W18-213	20					05/31/81		38564	-76373
299-W18-214	17					05/31/81		38473	-76395
299-W18-215	17					05/31/81		38370	-76422
299-W18-217	17					05/31/81		38140	-76459
299-W18-218	20					05/31/81		38058	-76462
299-W18-219	16					05/31/81		37940	-76470
299-W18-220	20					05/31/81		37840	-76471
299-W19-1	301	208	178	299	04/15/57	05/02/57	673.77	37613	-75491
299-W19-1O	209		176	196		05/31/65	674.04	37613	-75491
299-W19-1P	248	248	228	248		11/30/63	674.06	37613	-75491
299-W19-2	300	240	235	295	08/12/57	08/31/57	694.04	36849	-73000
299-W19-3	301	301	230	280	09/09/57	09/20/57	695.12	37819	-74098
299-W19-4	550	350	255	535	12/01/59	02/28/60	715.26	39000	-71999
299-W19-4O	280		260	280		05/31/65	715.52	39000	-71999
299-W19-4P	535	464	510	535		06/30/64	715.52	39000	-71999
299-W19-4Q		400	456	481			715.52	39000	-71999
299-W19-4R	411	348	386	411		06/30/64	715.52	39000	-71999
299-W19-4S	370					06/30/64	715.52	39000	-71999
299-W19-7	235	223	200	233	10/30/68	11/30/68	700	37000	-74125
299-W19-8	585				04/23/71	06/30/71	700	38574	-73268
299-W19-9	302	284	263	302	07/19/44	08/31/44	693.77	37895	-74225
299-W19-9	302	284	214	254	07/19/44	08/31/44	693.77	37895	-74225

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W19-10	573	468			04/06/76	04/30/76	683.35	37201	-75000
299-W19-11	250	250				04/30/83	695.7	37860	-74210
299-W19-12	250	250	210	250	12/01/82	01/25/83		38052	-75456
299-W19-12	250	250	33	100	12/01/82	01/25/83		38052	-75456
299-W19-13	249.5	249.5	210	250	05/21/84	06/22/84	695.08	37510	-74180
299-W19-13	249.5	249.5	20	145	05/21/84	06/22/84	695.08	37510	-74180
299-W19-14	250	245				06/30/84	693.21	37300	-74240
299-W19-15	285	285	225	230	03/23/85	06/07/85	693.28	37775	-74285
299-W19-15	285	285	15	90	03/23/85	06/07/85	693.28	37775	-74285
299-W19-15	285	285	170	197	03/23/85	06/07/85	693.28	37775	-74285
299-W19-15	285	285	245	250	03/23/85	06/07/85	693.28	37775	-74285
299-W19-15	285	285	270	275	03/23/85	06/07/85	693.28	37775	-74285
299-W19-16	285	285	225	230	04/05/85	06/13/85	694.96	37950	-74230
299-W19-16	285	285	270	275	04/05/85	06/13/85	694.96	37950	-74230
299-W19-16	285	285	15	90	04/05/85	06/13/85	694.96	37950	-74230
299-W19-16	285	285	170	197	04/05/85	06/13/85	694.96	37950	-74230
299-W19-16	285	285	240	245	04/05/85	06/13/85	694.96	37950	-74230
299-W19-17	358	358	230	240	10/15/85	01/03/86			
299-W19-17	358	358	300	305	10/15/85	01/03/86			
299-W19-17	358	358	350	355	10/15/85	01/03/86			
299-W19-17	358	358	270	275	10/15/85	01/03/86			
299-W19-18	361	360	230	240	09/25/85	12/12/85			
299-W19-18	361	360	315	320	09/25/85	12/12/85			
299-W19-18	361	360	350	355	09/25/85	12/12/85			
299-W19-18	361	360	265	270	09/25/85	12/12/85			
299-W19-19	257	249				01/31/87	694.9	37569	-72406
299-W19-20	252	252	231	251	04/01/86	06/11/86	691.04	37525	-72252
299-W19-21	226	226	201	226	05/08/86	07/08/86	678.53	37462	-75273
299-W19-22	135	135	100	135	05/20/86	06/10/86	687.89	37628	-74796
299-W19-23	255	252				03/31/87	698.44	37499	-72587
299-W19-24	255	249				04/30/87	696.95	37613	-72588
299-W19-25	248	246				04/30/87	691.64	37575	-72250
299-W19-26	250	248				04/30/87	693.6	37504	-72345
299-W19-27	230	230				04/30/87	683.65	37629	-75072
299-W19-28		256	236	256					

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W19-29		256	235	255					
299-W19-30								37603.2	-72934.7
299-W19-31	225.05	222.6	201.3	222.6	11/09/89	01/18/91		38275	-75457
299-W19-32	222.05	222.35	201.73	222.35	11/08/89	01/03/91		37887	-75459
299-W19-51	90	90				07/31/43	700.96	38160	-73500
299-W19-52	90	90				07/31/43	703.66	38410	-73285
299-W19-53	148	149			10/25/44	10/31/44	670.83	37898	-75577
299-W19-54	153	153			10/30/44	11/30/44	670.83	38197	-75577
299-W19-55	75	75			11/14/44	11/30/44	704	38210	-73218
299-W19-69	49	49			01/25/51	01/31/51	692	36920	-73100
299-W19-70	105	105			01/23/51	01/31/51	692	36860	-73100
299-W19-71	117	117			01/18/51	01/31/51	692	36800	-73100
299-W19-72	50	50			02/22/51	02/28/51	705	37859	-74247
299-W19-73	50	50			02/27/51	03/31/51	705	37859	-74322
299-W19-74	125				08/07/74	08/31/74	668.45	38017	-75594
299-W19-75	105				02/11/76	02/28/76	667	37920	-75600
299-W19-76	125				08/01/74	08/31/74	668.89	38095	-75593
299-W19-89	160					02/28/87	693.85	37520	-72390
299-W19-90	159					02/28/87	693.21	37553	-73341
299-W19-91	150	120				03/31/87	677.9	37617	-75269
299-W19-92	150	120				03/31/87	677.9	37492	-75319
299-W19-93	120					04/30/87	677.43	37289	-75431
299-W21-51	40				03/09/74	03/31/74	699	36500	-71500
299-W21-52	30				03/06/74	03/31/74	699	36534	-71486
299-W21-53	30				03/06/74	03/31/74	699	36526	-71474
299-W21-54	40				03/09/74	03/31/74	699	36514	-71466
299-W21-55	30				03/06/74	03/31/74	699	36500	-71463
299-W21-56	30				03/05/74	03/31/74	699	36486	-71466
299-W21-57	30				03/06/74	03/31/74	699	36474	-71474
299-W21-58	30				03/07/74	03/31/74	699	36466	-71486
299-W21-59	30				03/07/74	03/31/74	699	36463	-71500
299-W21-60	30				03/07/74	03/31/74	699	36466	-71514
299-W21-61	30				03/07/74	03/31/74	699	36474	-71526
299-W21-62	40				03/09/74	03/31/74	699	36486	-71534
299-W21-63	31				03/05/74	03/31/74	699	36500	-71537

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W21-64	40				03/09/74	03/31/74	699	36514	-71534
299-W21-65	31				03/06/74	03/31/74	699	36526	-71526
299-W21-66	31				03/07/74	03/31/74	699	36534	-71514
299-W21-67	31				03/06/74	03/31/74	699	36537	-71500
299-W21-68	40				03/11/74	03/31/74	699	36537	-71462
299-W21-69	51				03/12/74	03/31/74	699	36500	-71552
299-W21-70	40				03/10/74	03/31/74	699	36470	-71470
299-W21-71	41				03/10/74	03/31/74	699	36447	-71500
299-W21-72	50				03/10/74	03/31/74	699	36469	-71530
299-W21-73	50				03/10/74	03/31/74	699	36500	-71548
299-W21-74	40				03/11/74	03/31/74	699	36537	-71538
299-W21-75	50				03/11/74	03/31/74	699	36543	-71500
299-W21-76	32				03/12/74	03/31/74	699	36569	-71434
299-W21-77	30				03/12/74	03/31/74	699	36500	-71406
299-W21-78	30				03/12/74	03/31/74	699	36434	-71434
299-W21-79	31				03/12/74	03/31/74	699	36406	-71500
299-W21-80	32				03/12/74	03/31/74	699	36434	-71566
299-W21-81	30				03/13/74	03/31/74	699	36500	-71594
299-W21-82	30				03/13/74	03/31/74	699	36566	-71569
299-W21-83	32				03/13/74	03/31/74	699	36594	-71500
299-W22-22	300	297	225	300	07/05/60	07/31/60	690.38	36093.7	-73097.9
299-W22-23	307	231	200	300	07/28/60	08/31/60	690.97	36030.2	-73198.3
299-W22-24	575	575	220	560	08/11/60	09/08/60	692.61	35916.9	-72997.9
299-W22-24O	575	230	210	230	05/13/65	05/13/65	692.85	35917	-72997
299-W22-24O	575	230	220	560	05/13/65	05/13/65	692.85	35917	-72997
299-W22-24P	575	561	537	561		08/31/62	692.82	35917	-72997
299-W22-24P	575	561	220	560		08/31/62	692.82	35917	-72997
299-W22-24Q	575	497	475	497		08/31/62	692.8	35917	-72997
299-W22-24Q	575	497	220	560		08/31/62	692.8	35917	-72997
299-W22-24R	575	437	412	437		08/31/62	692.82	35917	-72997
299-W22-24R	575	437	220	560		08/31/62	692.82	35917	-72997
299-W22-24S	575	377	352	377		08/31/62	692.8	35917	-72997
299-W22-24S	575	377	220	560		08/31/62	692.8	35917	-72997
299-W22-24T	575	317	292	317		08/31/62	692.8	35917	-72997
299-W22-24T	575	317	220	560		08/31/62	692.8	35917	-72997

WELL CONSTRUCTION DATA FOR U-PLANT AGGREGATE AREA

Well	Completed Depth (ft)	Drilled Depth (ft)	Screen Top	Screen Bottom	Started	Completed	Elevation (ft)	Hanford Coordinates North-South	Hanford Coordinates East-West
299-W22-28	300		215	297	01/15/64	02/28/64	689	36150	-73770
299-W22-40								36242.3	-73041.7
299-W22-41								36142.1	-73033.8
299-W22-42								36052.7	73079.6
299-W22-43								36339.1	-73376.5
299-W22-60	30	30			12/23/48	12/31/48	689	36125	-73150
299-W22-73	60					03/31/82		36339	-73120
299-W22-75	169					04/30/82		36255	-73145
299-W23-4	300	253	180	300	05/24/57	06/30/57	662.82	35861	-76335
299-W23-11	235	227	165	230	10/10/72	11/30/72	664.14	35560	-76725
299-W23-13	218.15	217.17	195.9	217.17	10/17/90	12/04/90		36040	-76067
299-W23-63	50	50					668	35925	-76400
299-W23-71	54	54			12/17/53	12/31/53	668	35800	-76300
299-W23-210	100				09/08/77	09/30/77		36322	-76120
299-W23-228		24			02/07/80	02/22/80		36720	-77122

WELL COMPLETION SUMMARY REPORT

Project ARH-SA-248
Location West of 216-U-14 Ditch
Drilling Co. Boyles Brothers (Diamond Core)
Driller Harry Baser (Cable Tool)
Other (companies)
Geologist(s)

Well No. 299-W14-7 Temp. Well No. DH-12
Coordinates N 40003 W 75002
Elevation: Casing 677.69 Brass Marker

DRILLING METHOD (Diamond Core)
Rotary Air Mud 100'-531'
Cable Tool D 0'-10', 25'-100' H 10'-25'
Drilling Fluid Water & Mud ?
Other

COMPLETION DATA
Drilled Depth 531'
Completed Depth 531'
Date Started Sept. 16, 1976
Date Completed June 13, 1977
Static Water Level/Date

OTHER (check if performed)
___ Well Abandonment
___ Well Development
___ Aquifer Testing
___ Geophysical Log(s)
___ Lock and Cap
___ Downhole TV Inspection
___ As-Built, Driller's/ Geologist's Logs
___ Guardposts
___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Depth(s)
				-
				-

TEMPORARY CASING

Type	Nominal Diameter	Shoe/Casing Diameter	Placement
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Shoe/Casing Diameter	Placement
6" Carbon Steel	6"		0' - 102'
4" Carbon Steel	4"		0' - 100'
NC Oversize	3 3/4"		90' - 531'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement Grout	284' - 84'		
	-		
	-		
	-		
	-		

PUMP
Type Depth to Inlet Date Set

ACCEPTANCE
Completed Well: Accept Conditionally Accept
Reject

COMMENTS
Old As-Built notes the borehole being filled with drilling mud.
(RHO-LD-34)

Reviewed by Date For all blanks mark N/A if not applicable.

AS-BUILT DIAGRAM

Boring or Well Number 299-W14-7 Sheet 1 of 4

Location West of 216-U-14 Ditch Project ARH-SA-248

Logged by

Reviewed by Date

Date Well Started Sept. 16, 1976

Date Well Completed June 13, 1977

Well Construction Data — Cable Tool 0'-100'/Diamond Core T.D. Drill Bit

Geologic/Hydrologic Data — Sample Method 0-100' Drillers Log/100'-T.D. Geol. Logs

Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Lithologic Description
6" Carbon Steel Casing		○	5	○		50% Med. Sand 50% Fine Sand
Perforated 0'-20'		●	10	●		40% Cobbles 30% Gravel 30% Sand
			15			30% Cobbles 40% Gravel 30% Sand
			20			" " "
		○	25	○		60% Gravel 40% Sand
6" Carbon Steel Casing			30			" "
0'-102'			35			30% Fine Gravel 70% Sand
			40			" "
4" Carbon Steel Casing			45			30% Coarse, 40% Med, 30% Fine (Sand)
0'-100'			50			" " " "
			55			30% Fine Gravel 70% Sand
			60			" "
			65			" "
			70			10% Fine Gravel 90% Sand
			75			30% Fine Gravel 70% Sand
			80			" "
			85			" "
Cement Grout			90			10% Fine Gravel 90% Sand
84'-100'			95			" "
			100			" "
		□	105	□		Fine Sand w/Minor $CaCO_3$
			110			Med. - Coarse Sand
			115			No Recovery (113'-119')
Cement Grout			120			Fine Sand
98'-284'			125			"
			130			Fine Sand w/Caliche'
NC Oversize Casing			135			Gravel w/Minor $CaCO_3$
(3¾" dia.) 90'-531'			140			" " "
			145			" " "
			150			" " "
			155			" " "
Note: Hole filled w/			160			Gravel Coarse Sand
Viscous Drilling Mud			165			Gravel (No Recovery 164'-165')

Drill Bit/Sample Method Used:
□ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

AWY

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W14-7 Sheet 2 of 4
Location West of 216-U-14 Ditch Project ARH-SA-248

Logged by
Reviewed by Date
Date Well Started Sept. 16, 1976
Date Well Completed June 13, 1977

Well Construction Data: Diamond Core — Drill Bit

Geologic/Hydrologic Data: Sample Method — Geologist Core log

Description	Construction Diagram	Depth in Feet	Lithologic Diagram	Lithologic Description
		170		Gravel (No Recovery 168'-169')
Cement Grout 98'-284'		175		Gravel, Fine Sand, Minor $CaCO_3$
		180		Gravel w/ $CaCO_3$
		185		Gravel w/ Minor Clay
		190		Gravel, Sand
		195		Gravel, Sand w/ Minor $CaCO_3$
		200		" " " "
		205		Gravel, Fine Sand
		210		Gravel, Med.-U. Coarse Sand
		215		Gravel
		220		Gravel, Medium Sand
		225		" " "
		230		Gravel, Sand, Clay
		235		Gravel, Sand
		240		Gravel, Sand, Minor Clay
		245		Gravel, Coarse Sand
		250		Gravel, Medium Sand
		255		Gravel, Sand, Clay
		260		Sand, Clay
		265		Sandy Gravel
		270		" "
		275		" "
		280		Sandy Gravel, Clay, Minor $CaCO_3$
		285		Sandy Gravel
		290		Sandy Gravel w/ $CaCO_3$
NC Oversize Casing (3¾" dia.) 90'-531'		295		Coarse Sand
		300		Sandy Gravel
		305		" "
		310		" "
		315		Sandy Gravel w/ Clay lens
		320		Sandy Gravel, $CaCO_3$, Minor Clay
Note: Hole filled w/		325		" " " "
Viscous Drilling Mud		330		" " " "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0021

AS-BUILT DIAGRAM

Boring or Well Number 299-W14-7 Sheet 3 of 4

Location West of 216-U-14 Ditch Project ARH-SA-248

Logged by

Reviewed by Date

Date Well Started Sept. 16, 1976

Date Well Completed June 13, 1977

Well Construction Data				Depth in Feet	Geologic/Hydrologic Data		
Diamond Core	Drill Bit				Sample Method		Geologist Core Log
Description	Construction Diagram					Lithologic Diagram	Lithologic Description
				335			Sandy Gravel, $CaCO_3$, Minor Clay
NC Oversize Casing				340			No Recovery 335'-340'
(3¾" dia.) 90'-531'				345			Gravelly Sand
				350			" "
				355			Gravelly Sand, $CaCO_3$, Minor Clay
				360			Gravel
				365			Sandy Gravel w/ $CaCO_3$
				370			Sandy Gravel w/ Sand Stringers
				375			Sandy Gravel
				380			" "
				385			" "
				390			" "
				395			" "
				400			Sandy Gravel w/ Clay
				405			Sandy Gravel w/ Sand Stringers
				410			" " " "
				415			Sandy Gravel
				420			Sandy Gravel w/ $CaCO_3$
				425			Sandy Gravel
				430			Clay: Light Brown to Grey
				435			Clay w/ V. Fine Pebbles
				440			Clay, Pebbles, Sand: Grey to Green
				445			Clay, Pebbles, Sand w/ $CaCO_3$
				450			Claystone w/ Caliche'
				455			" " (Blue-Green)
				460			Sand, Minor Clay (Blue-Green)
				465			" " " " "
				470			Sandy Gravel
				475			" "
				480			" "
				485			" "
Note: Hole filled w/				490			" "
Viscous Drilling Mud				495			" "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W14-7 Sheet 4 of 4
Location West of 216-U-14 Ditch Project ARH-SA-248

Logged by
Reviewed by Date
Date Well Started Sept. 16, 1976
Date Well Completed June 13, 1977

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
Diamond Core	Drill Bit			Sample Method		Geologist Core Log
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			500			Gravel
			505			"
NC Oversize Casing			510			Sandy Gravel
(3-3/4") dia. 90'-531'			515			Gravel
			520			Sandy Gravel
			525			Basalt Vesicles filled w/Clay
			530			Basalt Vesicular
						TD= 531'
Note: Hole filled w/						
Viscous Drilling Mud						

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0023

WELL COMPLETION SUMMARY

Project
Location
Drilling Co.
Driller L. Kultena
Other (companies)
Geologist(s)

Well No. 299-W18-15 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) cable tool - D=0-24', 100'-142' H=24'-100', 142'-248'
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 248'
Completed Depth 243'
Date Started 3/12/90
Date Completed 4/25/90
Static Water Level/Date 122' 4/15/90

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	___ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforated	8"			170' - 243'
Perforated	8"			122' - 140'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
carbon steel	10"		0 - 20'
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
carbon steel	8"		0 - 248'
			-

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
cement grout	122' - 140'		
cement bentonite (interval) plug	240' - 243'		
cement grout	0' - 20'	6 sacks	
cement grout	170' - 195'		
	-		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-15 Sheet 1 of 2
Location U-Pond Project

Logged by
Reviewed by Date
Date Well Started 3/12/80
Date Well Completed 4/25/80

Well Construction Data		Depth in Feet	Geologic/Hydrologic Data	
Description	Construction Diagram (Drill Bit)		Sample Method	Lithologic Diagram	Lithologic Description (Data from sieving)
temporary 10" carbon steel		0			
cement grout 0'-20'		5	○		Sand
		10	○		"
		15	○		Muddy sandy gravel
		20	○		Slightly muddy sand
Perched water @ 21'		25	○		Muddy sandy gravel
		30	○		Muddy sand @ 31'
		35	●		No sample
		40			Slightly muddy sand
		45	●		no sample
		50	●		Sand @ 53'
		55			No sample
		60	●		Muddy sand
		65	●		Sand @ 69'
		70	●		Muddy sand
		75	●		Slightly muddy sand @ 73'
		80	●		Muddy sand
		85			" " @ 85
		90	●		Sand
		95	●		Muddy sand
		100	●		Sl. gravelly muddy sand
		105	○		Sl. gravelly sl. muddy sand
		110	○		Muddy sandy gravel
		115	○		Slightly gravelly sand
		120	○		Gravelly sandy mud
		125	○		Sandy mud
		130	○		Slightly gravelly mud
		135	●		Gravelly sandy mud
Perched water at 137'		140	●		Sandy mud
Perforated 137'-140'		145	●		Muddy sandy gravel cement @ 142
Pressure grouted 137'-140'		150	●		Gravel
		155	○		Muddy sandy gravel
		160	○		" " " "
		165			No sample

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0025

MHC

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-15 Sheet 2 of 2
Location U Pond Project

Logged by
Reviewed by Date

Date Well Started 3/12/80
Date Well Completed 4/25/80

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		Data from sinking
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			170	○		Muddy sandy gravel
			175	●		" " " " "
			180	●		Sl. muddy gravelly sand
water table @ 188' 4/15/80			185	○		Slightly gravelly sand
			190	○		Sandy gravel
			195	●		Muddy sandy gravel
			200	●		" " " "
8" carbon steel casing			205	●		Gravelly muddy sand
perforated 170'-243'			210			No samples
			215	●		No data
			220	●		Sl. muddy gravelly sand
			225	●		" " " " "
			230	●		" " " "
			235	●		Slightly gravelly sand
			240	●		Muddy sandy gravel
			245	●		Gravelly muddy sand
cement grout plug 246'-248'	TD = 248'					

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY

Project CT-1809, JAJ1340
Location 216-Z-12
Drilling Co.
Driller John G. L. Bultena
Other (companies)
Geologist(s)

Well No. 299-W18-18 Temp. Well No.
Coordinates N 38903 W 76270
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool Rig
Hard Tool 0'-265'
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 265'
Completed Depth 204'
Date Started 9/3/81
Date Completed 9/11/81
Static Water Level/Date 205 / 9/28/81
1881 2/14/84

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	✓ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforations 2cuts/ft	8"	10'	—	215' - 225'
Perforations 4cuts/round/ft	8"	25'		185' - 210'
~~Telescoping stainless steel screen~~	~~8"~~	~~20'10"~~	~~10~~	~~183' 204'~~

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	12"		0' - 20'

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	8"		0' - 265'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement Grout	0' - 20'	6 sacks	35 gals
Cement Grout	262' - 265'	2 sacks	15 gals
Backfill (Sand)	204' - 262'		

PUMP

Type submersible 3/4 hp Depth to Inlet 201' Date Set 2/15/84

ACCEPTANCE

Completed Well: Accept ___ Conditionally Accept ___
Reject ___

COMMENTS

Lost Dart Bailer in Well 245'-260'

Reviewed by ___ Date ___ Depths are below land surface unless noted.

9413203.0022

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-18 Sheet 1 of 2
Location 216-Z-12 Project CT-1809 JAJ1349

Logged by Driller: John G, L. Bultena
Reviewed by _____ Date _____

Date Well Started 8/3/81 | Modified 2/10/84
Date Well Completed 9/11/81 | 2/15/84

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		Data from Drillers Logs
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
20' of 12" Carbon Steel			0			
Casing (0'-20') temporary			5			Sand + Gravel
Cement Grout Surface Seal			10			" "
(0'-20')			15			" "
265' of 8" Carbon Steel			20			Loose Gravel (@ 17')
Casing (0'-265')			25			" "
			30			" "
			35			" "
			40			" "
			45			" " (Green)
			50			Sand (45'-48') Gravel (Consolidated Brown)
			55			" " "
			60			Boulders + Gravel
			65			" "
			70			" "
			75			Sand (72')
			80			"
			85			"
			90			
			95			"
			100			"
			105			"
			110			"
			115			"
			120			"
			125			
			130			"
			135			"
			140			Clay (Brown)
			145			" (White)
			150			Ringold (@ 46')
			155			"
			160			"
			165			Sand (heaving @ 162')

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ·O Drive Barrel ● Hard Tool ⊖ Split-Barrel

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-18 Sheet 2 of 2
Location 216-Z-12 Project CT-1809, JAJ 1349

Logged by Driller: John G., L. Bultena
Reviewed by _____ Date _____

Date Well Started 8/3/81 | Modified 2/10/84
Date Well Completed 9/11/81 | 2/15/84

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
			165			
265' of 8" Carbon Steel Casing (0'-265')			170			Sand + Gravel (heaving)
			175			Ringold
			180			"
			185			"
20'10" Telescoping Stainless Steel 10 slot Screen (183'-204')			190			Sand - gravel mix
			195			Ringold
			200			"
			205			" (f. sand)
Perforations 4 cuts/rd/ft (185'-210')			210			" + f. sand layer
			215			Ringold sand mix (coarse)
Perforations 2 cuts/ft (215'-225')			220			Sand + sm. gravel (heaving)
			225			Gravel (½" minus)
Backfill (Sand) (204'-262')			230			Sand (fine grained)
			235			" " "
			240			" " "
			245			" " "
4.5" x 15' Dart Bailer (lost in well) (245'-260')			250			"
			255			"
			260			Cobbles + Gravel
Cement Grout (262'-265')			265			" "
			270			Final Drilled Depth = 265'
			275			
Final Completion Depth = 204'			280			
			285			
			290			
			295			
			300			
			305			
			310			
			315			
			320			
			325			
			330			

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0029

WELL COMPLETION SUMMARY

Project CC0230 JAJ 1420-1
Location Backfilled 216-Z-1 Ditch
Drilling Co. Hatch
Driller Derrick Bultema
Other (companies)
Geologist(s)

Well No. 299-W18-19 Temp. Well No.
Coordinates N38503 W76403
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool Rig
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 250'
Completed Depth 250'
Date Started 5/25/92
Date Completed 6/29/92
Static Water Level/Date

OTHER (check if performed)

	Well Abandonment		Downhole TV Inspection
	Well Development	✓	Driller's Logs
	Aquifer Testing		Pad
	Geophysical Log(s)		Guardposts
	Lock and Cap		Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforations 4 holes/rd/ft	6"		—	220' - 250'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	10"		0' - 20'

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	8"		0' - 179'
Carbon Steel	6"		0' - 250'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement grout	0' - 20'		28 Gals
Cement grout	0' - 179'		80 Gals

PUMP

Type Submersible Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-19 Sheet 1 of 2

Location Backfilled 216-Z-1 Ditch Project CC0230 JAJ 1420-1

Logged by Driller: Jerry Bultena

Reviewed by _____ Date _____

Date Well Started 5/25/82

Date Well Completed 6/28/82

Well Construction Data: Description	Drill Bit / Construction Diagram	Depth in Feet	Sample Method / Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description
20' of 10" Carbon Steel Casing (Removed, 0'-20')		0		
		5		Top Soil + some sand (black)
		10		" " " " " " gravel
Cement Grout (0'-20')		15		Sand (black), silt + gravel
		20		Sand (black) + gravel
		25		Sand + gravel
178' of 8" Carbon Steel Casing (0'-178')		30		" "
		35		" "
Cement Grout (0'-178')		40		" "
		45		Sand (black) + silt
250' of 6" Carbon Steel Casing (0'-250')		50		" (tan) " "
		55		" " " "
		60		" " " more silt
		65		" " " " "
		70		Sand (black) + sandy silt
		75		F Sand mixed w/ black Sand
		80		" " " " " "
		85		More black Sand
		90		Sand (black)
		95		Sand (black) + sm. gravel
		100		" " " " " to 1"
		105		Silty Clay (brown)
		110		Clay (brown) - no water comes in
		115		Sand + sm. gravel (heaving)
		120		" " " " "
		125		sm gravel + sand (cemented spots)
		130		Sand + gravel (Cemented)
		135		" " " "
		140		" " " "
		145		Cobbles (in Rinsold)
		150		Lg. Cobbles " "
		155		" " " "
		160		Rinsold (tan)
		165		" " (very hard)

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-19 Sheet 2 of 2
Location Backfilled 216-Z-1 Ditch Project CC0230, JAJ 1420-1

Logged by Driller: Jerry Bultena
Reviewed by _____ Date _____

Date Well Started 5/25/82
Date Well Completed 6/28/82

Well Construction Data — Geologic/Hydrologic Data

Drill Bit — Sample Method Data from Drillers Log

Description	Construction Diagram	Depth in Feet	Lithologic Diagram	Lithologic Description
		165		
175' of 8" Carbon Steel Casing (0'-178')		170		Cobbles (cemented in Ringold)
		175		Ringold (tight)
Cement Grout (0'-175')		180		Cobbles & gravel
		185		" "
250' of 6" Carbon Steel Casing (0'-250')		190		Cobbles, sand & gravel
		195		" " " "
		200		Gravel (cemented)
		205		Sand (heaving)
		210		" "
		215		" " w/silt
		220		" " w/more cons. silt & gravel (darker brown)
		225		Ringold (unconsolidated)
Perforations Nouts/rd/ft (220'-250')		230		Sand & gravel (cemented in spots)
		235		" " " " "
		240		Sand, silt, & gravel (cemented)
		245		Sand, gravel, & silt "
		250		" " " " "
		255		
		260		
		265		
		270		
		275		
		280		
		285		
		290		
		295		
		300		
		305		
		310		
		315		
		320		
		325		
		330		

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY

Project
Location 216-Z-1 Ditch
Drilling Co. Hatch
Driller Jerry Bultena
Other (companies)
Geologist(s)

Well No. 299-W18-19 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool - bit not specified
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 250'
Completed Depth 250'
Date Started 5/25/82
Date Completed 6/28/82
Static Water Level/Date Not Recorded

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	___ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforations			4 cuts/rd/ft	220 - 250

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	12"		0 - 20'

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	6"		0 - 220'
" "	8"		0 - 172'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Grout	0 - 20'	28 gal	
"	0 - 172'	80 gal	

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Grouted annulus between 6" and 8" casing. Grouted around top of 8" casing.

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-19 Sheet 1 of 2
Location 216-Z-1 Ditch Project

Logged by
Reviewed by Date
Date Well Started 5/25/82
Date Well Completed 6/22/82

Well Construction Data		Depth in Feet	Geologic/Hydrologic Data	
	Drill Bit		Sample Method	Drillers Logs
Description	Construction Diagram		Lithologic Diagram	Lithologic Description
10"-dia. temporary		5		Top soil + some black sand
carbon steel casing (0-20')		10		Same with some small gravel
Cement grout outside		15		black sand, silt, + gravel
of 8" casing		20		Black sand + gravel
Cement grout between		25		Sand + gravel
2" and 8" casing		30		" "
		35		" "
2" Carbon steel casing		40		" "
		45		Black sand + silt
1" [illegible] steel casing		50		Sand (tan) + silt
		55		" "
		60		Sand (tan) and more silt
		65		"
		70		Some black sand + sandy silt
		75		Some fine sand mixed w/ black sand
		80		" " "
		85		More black sand
		90		Black sand
		95		Black sand + [illegible] gravel
		100		Sand w/ some 1" gravel
		105		Brown silty clay
		110		Brown clay
		115		Heaving sand + some small gravel
		120		" " "
		125		Cemented sand + small gravel
		130		Cemented sand + gravel
		135		" "
		140		" "
		145		Cobble in Rinsold
		150		Rinsold w/ large cobbles
		155		" " "
		160		Rinsold - tan
		165		" "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0034

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-19 Sheet 2 of 2

Location 216-Z-1 Ditch Project

Logged by

Reviewed by Date

Date Well Started 5/25/82

Date Well Completed 6/28/82

Well Construction Data: Description	Construction Diagram (Drill Bit)	Depth in Feet	Geologic/Hydrologic Data: Lithologic Diagram (Sample Method)	Lithologic Description
2" carbon steel casing		170		Cobbles cemented in Ringold
(0 - 178')		175		" "
		180		Cobbles + gravel
Cement Grout		185		" "
		190		Cobble sand
		195		" "
		200		Cemented gravel
		205		Hearing Sand
		210		" "
		215		Some silt w/ hearing sand
		220		Consol. silt + some gravel
		225		Unconsolidated Ringold
Perforations 4 cuts/round		230		Sand + Gravel (cemented in spots
1 round/ft, 220'-250'		235		" " "
		240		Cemented sand, silt, + gravel
		245		Cemented sand + gravel
		250		" " "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0035

WELL COMPLETION SUMMARY

Project
Location
Drilling Co. Dnivan
Driller J. Aultman
Other (companies)
Geologist(s)

Well No. 299-W18-20 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable tool
H 0'-250'
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 250'
Completed Depth 250'
Date Started 6/29/82
Date Completed 8/4/82
Static Water Level/Date

OTHER (check if performed)

- ___ Well Abandonment
- ___ Well Development
- ___ Aquifer Testing
- ___ Geophysical Log(s)
- ___ Lock and Cap
- ___ Downhole TV Inspection
- ✓ Driller's Logs
- ___ Pad
- ___ Guardposts
- ___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforated Casing	2"	29'		220' - 249'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon steel	12"		0' - 20'

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon steel	6"		0' - 250'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement Grout	0' - 20'	45 gal.	

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-[illegible]-20 Sheet 1 of 2

Location 216-7-11 Ditch Project

Logged by

Reviewed by Date

Date Well Started

Date Well Completed

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description (Basin drilling log)
12" (?) carbon steel, 0'-20', removed			5			Top soil and black sand
			10			Black sand and small gravel
cement grout 0'-20'			15			Black sand and large gravel
			20			" " " " " "
			25			Sand + some cemented gravel
			30			" " " " "
			35			" " " "
			40			Sand, gravel and some silt
			45			Sand silt + some small gravel
			50			Sand and silt (tan)
			55			" " "
			60			Sand silt some gravel (tan)
			65			Silt and gravel (tan + gray)
			70			" " " " "
			75			More gravel sand + silt
			80			Cemented gravel and silt
			85			Cemented cobbles
			90			Cemented cobbles and silt
			95			Silt + some small gravel
			100			" " " " "
			105			" " " "
			110			Silt sand + some small gravel
			115			" " " " " "
			120			" " " " "
			125			Silt and sand
			130			Silt and fine sand
			135			Cemented gravel + fine sand
			140			Starting into upper Ringold
			145			[illegible]
			150			[illegible]
			155			[illegible]
			160			[illegible]
		V	165			[illegible]

Drill Bit/Sample Method Used: ☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0027

AS-BUILT DIAGRAM

Boring or Well Number 299-W18-20 Sheet 2 of 2
Location 216-Z-11 Ditch Project

Logged by
Reviewed by Date
Date Well Started 6/29/82
Date Well Completed 8/4/82

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
			170			Hard Ringold + boulders
			175			" " "
			180			" " "
			185			" " "
			190			Ringold + large cobbles
			195			" " "
			200			Ringold cemented cobbles + gravel
			205			" " " "
			210			Ringold and cobbles
			215			" " "
8" carbon steel 0'-250',			220			Hard Ringold
perforated 220'-249'			225			Ringold sand and small gravel
			230			" " " " "
			235			Ringold sand in gravel
			240			" " " "
			245			" " " "
			250			Ringold and some sand

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊖ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY

Project
Location Camden Ave & 16th St. in 200 West Area
Drilling Co.
Driller Rouj-Roberts
Other (companies)
Geologist(s)

Well No. 299-W19-1 Temp. Well No.
Coordinates PN37613, PW75491. (from Hanford Wells)
Elevation: Casing 672.22' Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool Rig = AEC 22-3133
Hard Tool
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 301'
Completed Depth 301'
Date Started 4/15/53
Date Completed 5/2/57
Static Water Level/Date 200'/4/25/53

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	✓ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforations 1 hole/ft. staggered				175' - 299'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel (?)	8"		+1.5' - 300.3'
			-

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
	-		
	-		
	-		
	-		
	-		
	-		

PUMP

Type Bail Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Originally drilled to 301'. 2 piezometer tubes were installed in 1963 and 1965. The open intervals for these tubes was: (1) 176-196' and (2) 228-248'. Both of these tubes were later removed. No information is available on how the well was completed. Bottom in Hanford Wells is 222'

Reviewed by SSF Date 10/21/6 Depths are below land surface unless noted.

9413203.0039

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-1 Sheet 1 of 2

Location Camden Ave. & 11th ST. 200W Project

Logged by Driller: Row - Roberts

Reviewed by Date

Date Well Started 4/15/57

Date Well Completed

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description (Data from Driller's Logs)
301.8' of 2" Carbon Steel Casing			5			Top soil-sand-Gravel @ 4'-silt
(+1.5'-300.3')			10			Gravel and Boulders
			15			" "
			20			" "
			25			Sand-gravel-silt
			30			Gravel, Caves loses water
			35			Pure Gravel " " "
			40			" " - 3' sand and gravel @
			45			Gravel. Caves loses water
			50			Gravel-sand " " "
			55			Sand-some silt Caves
			60			" " " "
			65			" " " " (top 62.2')
			70			Sand-gravel-some silt
			75			Sandy-some silt - Tan
			80			" " " "
			85			" " " "
			90			" " " "
			95			" " " "
			100			Sandy - Tan Silt
			105			" " "
			110			" " "
			115			" " "
			120			" " "
			125			" " "
			130			" " "
			135			Heavy silt and Sand
			140			" " " "
			145			" " " "
			150			Heavy silt-sand-Caliche-sm. gravel
			155			Gravel and Sand
			160			"
			165			Gravel - Sand Caves - loses water

Drill Bit/Sample Method Used: ☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hand Tool ⊖ Split-Barrel

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-1 Sheet 2 of 2
Location Camden Ave & 16th St 200 W Project

Logged by Driller: Rous-Richards
Reviewed by Date
Date Well Started 4/15/53
Date Well Completed

Well Construction Data: Description	Construction Diagram (Drill Bit ▼)	Depth in Feet	Geologic/Hydrologic Data: Sample Method ▼	Lithologic Diagram	Lithologic Description (Data from Drillers Logs)
		170			Gravel-sand. Caves-loses water
		175			" " " " "
		180			" " " " "
Perforations 1/ft		185			" " " " "
staggered (178'-299')		190			Sand-gravel " " "
		195			" " " " "
		200			Sand-boulders-gravel (from 178') " " Caves
		205			" " " " " "
According to Hanford Wells		210			Sand-gravel
D/Bottom = 298'		215			Sand-gravel-v. little silt
		220			" " " " " -Caves
2 - 1.5" dia observation tubes		225			Sand-gravel-some silt "
were installed in 1963 and 1965.		230			Gravel-sand " " "
The open intervals for these tubes		235			" " silt "
were: (a) 196-196' and (b) 198-199'		240			Boulders-gravel-sand-silt
Both of these tubes were later		245			Sand-gravel-silt
removed. No completion info		250			" "
is available after tube removal.		255			" "
		260			Sand-gravel-lots of silt-Caves
		265			" " " " " "
		270			" " " " " "
		275			Muck (heaving)
		280			" "
		285			E Sand-gravel "
		290			" " " "
		295			" " " "
		300			Gravel-sand-some silt
Bottom of 8" Casing = 300.3'		305			
					Final Drilled Depth = 301'

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊖ Split-Barrel

WELL COMPLETION SUMMARY

Project
Location 241-U-361
Drilling Co.
Driller Hatch, Darrel Ludtke
Other (companies)
Geologist(s)

Well No. 299-W19-3 Temp. Well No.
Coordinates PN 37319, PW 74098 (From Hanford Grid)
Elevation: Casing 695.12' Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool (most-U Hard Tool)
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 301'
Completed Depth 301' Modified 3/6/85
Date Started 9/19/57
Date Completed 9/20/57 4/9/85
Static Water Level/Date 252'/9/20/57
H2O Level/Date 223'/4/9/85 → Could be a typo on drill logs could be 225' or 223'

OTHER (check if performed)

Well Abandonment	Downhole TV Inspection
Well Development	✓ Driller's Logs
Aquifer Testing	Pad
Geophysical Log(s)	Guardposts
Lock and Cap	Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Perforations 1cut/foot Spiraled	8"			230' - 260'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	8"		+2.5' - 301'
Carbon Steel w/ 1½" packer	5"		0' - 213'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement Grout	0' - 301'		618 Gallons
C. Sand bridge below grout m/ [illegible]	≈301' - ≈213'		13 Gallons
	-		
	-		
	-		
	-		

PUMP

Type Submersible Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Perforations for Grouting between 5" + 8' are: 0'-80' and 170'-201' 4cuts/round/ft

Reviewed by Date 10/2[illegible] Depths are below land surface unless noted.

9413203.0042

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-3 Sheet 1 of 2
Location 241-U-361 Project

Logged by Driller: Hatch, Darrel Ludtke
Reviewed by Date

Date Well Started 9/9/57 Modified 3/11/85
Date Well Completed 9/20/57 4/9/85

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		Data from Drillers Logs
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
303.5' of 8" Carbon Steel			5			Silt-gravel-cobbles
Casing (+2.5'-301')			10			" " "
213' of 5" Carbon Steel			15			Sand-silt gravel 2"
Casing (0'-213')			20			" " " 1"
Perforations 4cuts/rd/ft			25			" " " "
(0'-80')			30			" " " "
Cement Grout (0'-201')			35			" " " "
			40			" " " "
			45			" " " 1/2"
			50			" " " "
			55			" " " "
			60			" " " 2"
			65			" " " "
			70			" " " "
			75			" " " "
			80			" " " "
			85			" " " "
			90			" " " "
			95			Gravel-sand-silt
			100			Gravel-silt
			105			Silt w/v. little gravel
			110			" " " " "
			115			" " " " "
			120			Sand-silt-gravel [illegible]
			125			" " " "
			130			" " " "
			135			Cement Sand
			[illegible]			Yellow Clay + gravel particles
			145			Sandy Clay
			150			" "
			155			
			[illegible]			
			165			"

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊖ Split-Barrel

A-1300-136 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-3 Sheet 2 of 2
Location 241-U-361 Project

Logged by Driller: Hatch, Darrel Ludtke
Reviewed by Date

Date Well Started 9/9/57 Finished 3/10/55
Date Well Completed 9/20/57 4/9/85

Well Construction Data: Description	Construction Diagram	Depth in Feet	Geologic/Hydrologic Data: Lithologic Diagram	Lithologic Description (Data from Drillers Logs)
303.5' of 8" Carbon Steel		170		Sandy Clay
Casing (+2.5-301')		175		" " (Gravel @ 173')
213' of 5" Carbon Steel		180		Sand-gravel
Casing (0'-213')		185		" "
		190		" "
Cement Grout (0'-201')		195		Sand and cemented gravel
Perforations 4 cuts/rd/ft		200		" " " "
(170'-201')		205		" " " "
Sand Bridge (201'-213')		210		" " "
10" Packer @ 213'		215		" " " "
		220		" " " "
		225		Cemented sand and gravel
		230		" " "
		235		" "
Perforations 1 cut/ft		240		" " "
Spiraled (230'-250')		245		" " Clay
		250		" "
		255		Loose sand-gravel
		260		" " "
		265		" "
		270		Soft sandy clay
		275		Brown sand and gravel 4"
		280		" " " " " Loose
		285		" " " " " "
		290		" " " " " "
		295		Loose sand and gravel
		300		Dark Brown cemented sand and gravel
Final Completion Depth = 301'		305		Final Drilled Depth = 301'

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hand Tool ⊖ Split-Barrel

WELL COMPLETION SUMMARY

Project
Location
Drilling Co.
Driller ELMER CLOSE
Other (companies)
Geologist(s) N/A

Well No. 299-W19-4 Temp. Well No. 299-W39-72
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) CABLE TOOL - H + D
Drilling Fluid WATER
Other

COMPLETION DATA

Drilled Depth 550'
Completed Depth 350'?
Date Started 12-1-59
Date Completed 2-15-60
Static Water Level/Date 270' 2/15/60

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	___ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
X ~~Lock~~ and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
PERFORATED [illegible]	8"	189'		270' - 443'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
N/A		8"	+2.0 - 539'
			-

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Unknown	-		
	-		
	-		
	-		
	-		
	-		

PUMP

Type N/A Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Originally drilled to 550'. 4 piezometer tubes were [illegible] 1985. The tubes were [illegible] but no information is available on how they were removed. Diameter [illegible] 350'

Reviewed by SF Date N/A Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-4 Sheet 1 of 4

Location _____ Project _____

Logged by _____ Date Well Started 12-1-59

Reviewed by SST Date 10/21/91 Date Well Completed 2-15-60

Well Construction Data			Depth in Feet		Geologic/Hydrologic Data	
	Drill Bit			Sample Method	Data from driller's log	
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
8" CASING			5			SAND 0-4'
WATER LEVEL - 270'			10			GRAVEL 4-15'
PERFORATED CASING - 255-443';			15			"
445-485'; 520-535'			20			GRAVEL W/BOULDERS 15-20'
SHOE JOINT 25'			25			GRAVEL 20-25'
			30			GRAVELLY SAND 25-70'
			35			" "
			40			" "
			45			" "
			50			" "
			55			" "
			60			" "
			65			" "
			70			" "
			75			SAND 70-115'
			80			"
			85			"
			90			"
			95			"
			100			"
			105			"
			110			"
			115			"
			120			MUDDY SAND 115-170'
			125			" "
			130			" "
			135			" "
			140			" "
			145			" "
			150			" "
			155			" "
			160			" "
			165			" "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-4 Sheet 2 of 4
Location _____ Project _____

Logged by _____ Date Well Started 12-1-59
Reviewed by _____ Date _____ Date Well Completed 2-15-60

Well Construction Data			Depth in Feet		Geologic/Hydrologic Data	
		Drill Bit		Sample Method		
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
8" CASING		○	170	○		MUDDY SAND 115-170'
		●	175	●		MUD 170-200'
			180	●		"
			185	●		"
			190	●		"
			195	●		"
			200	●		"
			205	●		MUDDY GRAVEL 200-210'
			210	●		" "
			215	●		MUD 210-230'
			220	●		"
			225	●		"
			230	●		"
			235	●		MUDDY GRAVEL 230-245'
			240	●		" "
			245	●		" "
			250	●		MUD 245-265'
			255	●		"
			260	●		
			265	●		"
			270	●		MUDDY GRAVEL 265-295'
			275	●		" "
Perforated 270'-442'			280	●		" "
			285	●		"
			290	●		"
			295	●		" "
			300	●		GRAVEL 295-300'
			305	●		MUDDY GRAVEL 300-305'
			310	●		GRAVELLY SAND 305-315'
			315	●		" "
			320	●		MUDDY SAND GRAVEL
			325	●		" " " 315-335'
			330	●		" " "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0047

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-4 Sheet 3 of 4

Location _____ Project _____

Logged by _____ Date Well Started 12-1-59

Reviewed by _____ Date _____ Date Well Completed 2-15-60

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
8" CASING		●	335	●		MUDDY SANDY GRAVEL
			340	●		GRAVEL W/BOULDERS
			345	●		" 335-345'
Depth to bottom listed	?		350	●		MUDDY SAND W/BOULDERS 345-350
in "Hanford Wells" is 350'			355	●		SANDY GRAVEL W/BOULDERS
4 piezometers were set			360	●		" " 350-365'
in 1964 and 1965. The open			365	●		" "
intervals for these piezometers			370	●		GRAVEL W/BOULDERS 365-385'
were: (F) 515'-535'			375	●		"
(Q) 455'-475'			380	●		"
(R) 335'-415'			385	●		"
(S) 345'-370'			390	●		MUDDY SANDY GRAVEL
(O) 260-280'			395	●		" " " 385-443'
These piezometers were later			400	●		" " "
removed. No information			405	●		" " "
[illegible]			410	●		" " "
[illegible]			415	●		" " "
[illegible]			420	●		" " "
			425	●		" " "
			430	●		" " "
			435	●		" " "
			440	●		" " "
			445	●		" " "
			450	●		MUD 443-451'
			455	●		MUDDY SANDY GRAVEL
			460	●		" " " 451-470'
			465	●		" " "
			470	●		" " "
			475	●		GRAVEL W/BOULDERS
			480	●		" 470-480'
			485	●		MUDDY SANDY GRAVEL 480-485'
			490	●		" "
			495	●		GRAVEL 490-505'

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-4 Sheet 4 of 4

Location _____ Project _____

Logged by _____ Date Well Started 12-1-59

Reviewed by _____ Date _____ Date Well Completed 2-15-60

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
8" CASING SET 541'		●	500	●		GRAVEL 490-505'
			505	●		"
			510	●		MUDDY SAND 505-506'
			515	●		MUD 506-508'
			520	●		MUDDY SAND 508-525'
			525	●		GRAVELY SAND 525-535'
			530	●		" "
			535	●		" "
			540	●		SAND 535-540'
			545	●		BASALT 540-550'
			550	●		

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

9413202.0019

WELL COMPLETION SUMMARY

Project ARH-SA-221
Location
Drilling Co. JAJ ?
Driller HATCH
Other (companies)
Geologist(s)

Well No. 299-W19-10 Temp. Well No. DH-7
Coordinates
Elevation: Casing _____ Brass Marker _____

DRILLING METHOD

Drilling Method(s) Cable Tool to 148'
Rotary to 573' Continuous core
Drilling Fluid WATER
Other

COMPLETION DATA

Drilled Depth 573'
Completed Depth 573'
Date Started 1-19-76
Date Completed 4-2-76
Static Water Level/Date 210'

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	___ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

No Screens

Type	Outer Diameter	Length	Slot Size	Interval
				-
				-

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel.	6"	6 5/8"	0' - 148'
" "	4"	4 1/2"	0' - 148'
~~NX Casing~~		3.5"	0 - 456'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement	0' - 148'		
"gelled in place"	0' - 456		
	-		
	-		
	-		
	-		

PUMP

Type _____ Depth to Inlet _____ Date Set _____

ACCEPTANCE

Completed Well: Accept _____ Conditionally Accept _____
Reject _____

COMMENTS

Log says hole filled w/ "viscous drilling mud" Hanford wells P/Eotom = 462'

Reviewed by _____ Date _____ Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 1 of 4
Location Project ARH-SA-221

Logged by HATCH (0'-148')
Reviewed by Date
Date Well Started 1-19-76
Date Well Completed 4-2-76

Well Construction Data: 0-148' CARLETON; 148-406 Diamond-cored NC hole; 406-5

Drill Bit

Geologic/Hydrologic Data: Sample Method; Lith from ARH-C-13

Description	Construction Diagram	Depth in Feet	Lithologic Diagram	Lithologic Description
		0		
		5		Cemented material; Large cobbles, sml gravel, sml boulders
6" casing to 148'		10		"
4" casing to 148'		15		Cobbles, sml coulders, gravel & sand
cemented in place		20		"
		25		"
3.675 NC standard		30		Coarse gray sand & silt
wireline hole to 406'		35		Cobbles, gravel & coarse sand
3.5 (O.D.) NX casing to		40		Large cobbles, gravel & coarse sand
406'; "rolled in place"		45		Gravel & coarse sand
		50		Gravels to 2" silt & sand
		55		Large coulder, Large cobbles, gravels & coarse sand
		60		Small gravels & coarse sand
		65		Loose coarse sand
		70		Medium sand & silt
		75		"
		80		Medium sand & - w/silt lenses
		85		
		90		
		95		Sand & silt
		100		"
		105		"
		110		"
		115		113'-Loose sand, small pebbles 114'-caliche layer
		120		117-120'-Sand & silt
		125		Hard-packed sand & silt
		130		Coarse sand & silt
		135		"
		140		"
		145		Fine sand, hard silt to 145'
		150		145-150' Silty fine
		155		to very fine sand
		160		silty medium to fine sand
		165		

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊖ Split-Barrel

KF

A-1800-186 (05/90)

9413203.0051

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 2 of 4
Location Project ARH-SA-221

Logged by
Reviewed by Date
Date Well Started 1-19-76
Date Well Completed 4-2-76

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data	
	Drill Bit			Sample Method	
Description	Construction Diagram			Lithologic Diagram	Lithologic Description
			165		
			170		Coarse to medium sand sandy gravel
			175		"
			180		"
			185		"
NC Hole (3 5/8") and			190		"
NX Casing (3 1/2" O.D.)			195		"
0' to 405'			200		"
"pulled in place"			205		"
Water Table 210'			210		"
			215		"
			220		"
			225		"
			230		"
			235		"
			240		"
			245		"
			250		Well indurated conglomerate CaCO
			255		medium sand SiO2 conglomerate
			260		Nodules or rinds on pebbles
			265		Well indurated
			270		conglomerate, CaCO3
			275		
			280		
			285		Coarse to medium sand
			290		SiO2 conglomerate
			295		Coarse to medium sand
			300		SiO2 conglomerate
			305		Coarse sand
			310		Conglomerate
			315		
			320		
			325		
			330		Clay, 1" thick

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

Well indurated

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 3 of 4
Location _____ Project ARH-SA-221

Logged by _____ Date Well Started 1-19-76
Reviewed by _____ Date _____ Date Well Completed 4-2-76

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description
			330			
			335			Medium Sand
			340			Conglomerate
			345			Cmce to medium $CaCO_3$
			350			SiO_2 Conglomerate
			355			Conglomerate
			360			
			365			
			370			
			375			
			380			6" coarse sand
			385			3" coarse sand
			390			
			395			
NQ HOLE (3 5/8") and			400			
NX Casing (3 1/2 o.d.) to 406'			405			
"pulled in place"			410			
			415			
NX Hole (2.937)			420			No Recovery 413-423
to 573'			425			
			430			Well to poorly-indurated
			435			conglomerate, no $CaCO_3$
			440			to $CaCO_3$
			445			
(P/Bottom 418' - Hanford Wells)			450			
Hole filled with "viscous			455			
drilling mud"			460			
			465			Indurated sandy clay
			470			($CaCO_3$)
			475			Green conglomerate
			480			fair to poor induration
			485			$CaCO_3$ to No $CaCO_3$
			490			
			495			

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0063

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 4 of 4
Location Project AR H-SA-221

Logged by
Reviewed by Date
Date Well Started 1-19-76
Date Well Completed 4-2-76

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit ▼			Sample Method ▼	
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			495			
			500			
			505			Green medium sand
			510			~~Green conglomerate~~ fair to poor induration
			515			Mn $CaCO_3$ to $CaCO_3$
			520			
			525			Cobbles, 523-524'
			530			Green Conglomerate same as above
			535			
			540			
			545			
			550			
			555			Green medium Sand
Hole filled with "viscous drilling mud"			560			Basalt at 557'
			565			
			570			
NX Hole to 573'			575			

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY

Project: B404-CL
Location:
Drilling Co.: Garza Construction
Driller: Jerry Bultena
Other (companies): ONWEGO
Geologist(s):

Well No.: 299-W11-94 Temp. Well No.:
Coordinates: N37300 W74240
Elevation: Casing: Brass Marker:

DRILLING METHOD
Drilling Method(s): Cable Tool
Drilling Fluid: Water
Other:

COMPLETION DATA
Drilled Depth: 250'
Completed Depth: 250'
Date Started: 5-18-84
Date Completed: 6-14-84
Static Water Level/Date: 220'

OTHER (check if performed)
- ___ Well Abandonment
- ___ Well Development
- ___ Aquifer Testing
- ___ Geophysical Log(s)
- ___ Lock and Cap
- ___ Downhole TV Inspection
- ___ Driller's Logs
- ___ Pad
- ___ Guardposts
- ___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Stainless Steel	5"	42'7"	20	207'5" - 250'
Perforations " "	8" "			148 - 55 42 33

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	12"		0 - 20'

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	8"		-
" "	6"		-

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Surface Seal cement	0 - 20'	8 bags	
Grout cement	0' - 150'	4½ bags	206 gal

" PUMP installed at 231' "
Type: Depth to Inlet: 231'? Date Set:

ACCEPTANCE
Completed Well: Accept: Conditionally Accept:
Reject:

COMMENTS
Annulus between 6" & 8" casing filled with grout.
Well surface - Ground water monitor ??

Reviewed by: Date: Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-14 Sheet 1 of 2
Location _____ Project B-404-CL

Logged by Jerry Bultena
Reviewed by _____ Date _____

Date Well Started 5-18-84
Date Well Completed 6-14-84

Well Construction Data: Description	Construction Diagram (Drill Bit)	Depth in Feet	Geologic/Hydrologic Data: Lithologic Diagram (Sample Method)	Lithologic Description
Cement surface seal		0		
0' to 20' between		5		Sand, gravel & cobbles
12" temporary casing		10		"
		15		"
		20		Cemented sand & gravel
8" casing 0'-150'		25		Black sand (50%), gravel (50%)
6" casing 0'-250'		30		Black (50%) sand & small gravel
		35		Brown sand & silt 50%, sml grav
Cement grout between		40		"
8" & 6" casing, 0'-150'		45		"
		50		"
		55		Cemented gray gravel & blk sand
		60		"
		65		Brn sand silt, gravels & blk sand
		70		"
		75		"
		80		Brn sand, silt & 50% gravels
		85		"
		90		Cemented gravels & silt
		95		"
		100		"
		105		"
		110		"
		115		Brn sand silt & sml gravels
		120		"
		125		"
		130		Brn & Blk sand, silt & sml gravels
		135		"
		140		"
		145		"
		150		"
		155		Silty tan & brn sand
		160		"
		165		Increasing fines & tan & brn sand

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

KMF

A-1800-186 (05/90)

9413203.0056

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-14 Sheet 2 of 2

Location _____ Project _____

Logged by _____ Date Well Started 5/18/84

Reviewed by _____ Date _____ Date Well Completed 6/14/84

Well Construction Data			Depth in Feet	Sample Method	Geologic/Hydrologic Data	
Description	Construction Diagram (Drill Bit)				Lithologic Diagram	Lithologic Description
			165	●		
			170	●		"
			175	●		cemented gravel w/sand
			180	●		"
			185	●		"
			190	●		" to 188'
			195	●		large cemented cobbles, gravel cemented gravels blk sand silt
			200	●		"
			205	●		"
			210	●		"
			215	●		"
5"-diameter, 20 slot			220	●		cemented gravel, cobbles, blk sand silt
125'7" length screen			225	●		cemented gravel, cobbles
from 124'5" to 250'			230	●		"
packer at top of screen			235	●		cemented sands + gravels
			240	●		" with some fine sand
			245	●		fine tan heaving sand
			250	●		"

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0057

WELL COMPLETION SUMMARY

Project
Location
Drilling Co.
Driller D. Garcia
Other (companies)
Geologist(s) E. Jensen T. Likala

Well No. 299-W19-16 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool
DB 0'-55' 57'-84', 87'-106' H 55'-57', 84'-87', 106'-285'
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 285'
Completed Depth 285'
Date Started 4/5/85
Date Completed 6/13/85
Static Water Level/Date 220' 4/25/85

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	✓ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

MORE ON BACK

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Telescoping Screen	5'	5'	20	225' - 230'
" " "	5'	5'	10	240' - 245'

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon steel	10"		0' - 20'
" "	16"		225' - 285'
			-
			-

MORE ON BACK

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	8"		0 - 200'
" "	16"		0 - 225'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement grout	0' - 200'	750 gal	
	-		
	-		
	-		
	-		
	-		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

8" casing perforated 15'-20', 170'-192'
Screen assembly is alternating blanks and screens from 215'-235'

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 209-W19-16 Sheet 1 of 2
Location 216-W1 + 2 Cribs Project

Logged by
Reviewed by Date

Date Well Started 4/5/85
Date Well Completed 6/12/85

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description (Data from sieve)
10" carbon steel, removed 0'-20'			5			Slightly silty sand
			10			Muddy sandy gravel
			15			Sl. muddy gravelly sand
			20			" " " " "
			25			Gravelly sand
			30			Slightly gravelly sand
			35			Sand " " "
			40			Sl. gravelly sl. muddy sand
			45			Sandy gravel
			50			" " "
			55			Gravelly sand
			60			" " "
			65			" "
			70			Sandy gravel
8" carbon steel 0'-200'			75			Muddy sandy gravel
perforated 15'-20'			80			" " " " "
			85			Sl. muddy gravelly sand
			90			Muddy sandy gravel
cement grout 0'-200'			95			Sand " "
perched water @ 102'			100			Slightly muddy sand
			105			" " " " " "
			110			" " "
6" carbon steel 0'-225'			115			" " "
			120			" " "
			125			" " "
			130			" " "
			135			" " "
			140			" " "
			145			" " "
			150			" " "
			155			" " "
			160			Muddy sand
			165			Sandy mud

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0059

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-16 Sheet 2 of 2

Location 216-U1+2 Cribs Project

Logged by

Reviewed by Date

Date Well Started 4/5/85

Date Well Completed 6/13/85

Well Construction Data		Depth in Feet	Geologic/Hydrologic Data	
Drill Bit			Sample Method	Data from [illegible]
Description	Construction Diagram		Lithologic Diagram	Lithologic Description
		170		Slightly gravelly sand
5" carbon steel 0'-200'		175		Gravelly sand
perforated 170'-192'		180		Sl. muddy gravelly sand
		185		" " " "
cement grout 0'-200'		190		" " "
		195		" " "
		200		Muddy sand
		205		No sample
6" [illegible] 0'-225'		210		Gravelly muddy sand
		215		Sl. muddy gravelly sand
5" [illegible] w/ packer		220		Sl. muddy sand
215'-225'		225		Sl. gravelly sl. muddy sand
5" 20 slot screen 225'-230'		230		Sand
5" [illegible] 230'-240'		235		Sl. muddy gravelly sand
		240		Sand
5" 20 slot screen 240'-245'		245		Slightly muddy sand
		250		Sl. gravelly sl. muddy sand
5" [illegible] 245'-270'		255		Gravelly sand
		260		" "
		265		" "
		270		Sandy gravel
5" 20 slot screen 270'-285'		275		Sl. muddy gravelly sand
		280		Sl. gravelly sl. muddy sand
5" [illegible] 275'-285'		285		Silty [illegible] sand
	TD = 285'			

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY REPORT

Project
Location 216-U-17 Crib
Drilling Co. Associated Drilling
Driller L. Cordon
Other (companies)
Geologist(s) M. Chamness

Well No. 299-W19-20 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Rotary Air Mud
Cable Tool D 0-176' 205-211' H 176'-205' 211'-
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 252'
Completed Depth 252'
Date Started 7-1-1986
Date Completed 6-11-1986
Static Water Level/Date 226'8" 5/[illegible]

OTHER (check if performed)

- ___ Well Abandonment
- ___ Well Development
- ___ Aquifer Testing
- ___ Geophysical Log(s)
- ___ Lock and Cap
- ___ Downhole TV Inspection
- ✓ As-Built, Driller's/ Geologist's Logs
- ___ Guardposts
- ___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Depth(s)
Stainless Steel w/10' Blank above screen.	6" ?	20'	10	251' - 231'

TEMPORARY CASING

Type	Nominal Diameter	Shoe/Casing Diameter	Placement
Carbon Steel	8"		0' - 220'

PERMANENT CASING

Type	Nominal Diameter	Shoe/Casing Diameter	Placement
Carbon Steel	6"		0 - 220'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Grout	200 - 0	660 gal.	

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Reviewed by Date For all blanks mark N/A if not applicable.

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-20 Sheet 1 of 2

Location 216-U-17 Project

Logged by

Reviewed by Date

Date Well Started 4/1/86

Date Well Completed 6/11/86

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method	Geologist Log	
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			5			Sand
			10			Gravelly Sand
			15			SAND
			20			"
8" Carbon Steel Casing			25			Gravelly Sand
(0 - 180') removed			30			Sand
			35			"
			40			Gravelly Sand
			45			Sand
6" Carbon Steel Casing			50			Gravelly Sand
(0 - 220')			55			Sand
			60			"
			65			Sl. Muddy Sand
			70			Sand
			75			"
			80			"
			85			"
			90			"
			95			"
			100			"
			105			"
			110			"
			115			"
			120			"
			125			"
			130			"
			135			"
			140			"
			145			Sl. Muddy Sand
			150			Sand
			155			"
			160			Muddy Sand
			165			Sandy Mud

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

SST

A-1800-186 (05/90)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-20 Sheet 2 of 2
Location 216-U-17 Project

Logged by
Reviewed by Date

Date Well Started 4/1/96
Date Well Completed 6/11/96

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
			170	○		Muddy Sand
2" dia. Carbon steel casing		○	175	○		Mud
(0-120'), removed			180	●		Mud (some caliche)
			185	●		" " "
6" dia. Carbon Steel Casing			190	●		Muddy Sand w/ 4% caliche chunks
(0-220')			195	●		" " "
			200	●		Muddy Sand, 1% gravel + caliche chunks
			205	○		Mud
		✓	210	○		Muddy Sand
		●	215	●		" "
			220	●		" "
5" dia. Stainless Steel Casing			225	●		" "
(220-231')			230	●		Sl. muddy Gravelly Sand
			235	●		Muddy Sandy Gravel
5" dia. Stainless Steel			240	●		" " "
Screen (slot			245	●		" " "
(231-251')		✓	250	●		Sand (249-252')
		●				Muddy Sandy Gravel @ 252'

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0063

WELL COMPLETION SUMMARY

Project
Location 216-U-17
Drilling Co. Onwego
Driller Russ Vance
Other (companies)
Geologist(s) MA Chamness
DC Weekes

Well No. 299-W19-24 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool: Hard Tool 63-75', 165-255. Drive Barrel 0-63', 75-165'
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 255'
Completed Depth 251'
Date Started 2/23/87
Date Completed 4/10/87
Static Water Level/Date 231.6 3/10/87

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	___ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
Stainless Steel	5"	20'	10?	231 - 251

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	10"		0 - 114'4"
" "	8"		0 - 210'4" ?

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Stainless Steel	5"		0 - 231

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Sand	? - ?		
Granular Bentonite	? - ?		
Cement Grout	0 - 20'		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Reviewed by Date Depths are below land surface unless noted.

SST

9413203.0064

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-24 Sheet 1 of 2
Location U-17 Crib Project

Logged by
Reviewed by Date

Date Well Started 2/23/87
Date Well Completed 4/10/87

Well Construction Data: Description	Construction Diagram (Drill Bit)	Depth in Feet	Geologic/Hydrologic Data: Sample Method	Lithologic Diagram	Lithologic Description
		5			Sl. Muddy, Sl. Gravelly Sand
10" Carbon steel casing		10			Sl. Muddy Sand
(0 - 114'4", removed)		15			Sl. Gravelly Muddy Sand (clean)
Cement Grout 0 - 20'		20			Sl. Muddy Sand (clean)
Granular Bentonite 31? to 20'		25			Sand
		30			Sand
Cement placed around broken		35			Sl. Gravelly Sand
5" casing - exact location		40			Gravelly Sand
unknown		45			Sand
		50			"
8" Carbon Steel casing		55			Sl. Muddy Sandy Gravel
(0 - 210'4"?, removed)		60			" " "
		65			(Boulder @ 62') Sandy Gravel
		70			Gravelly Sand (starts @ 62')
Granular Bentonite		75			Sand
(36'? to ?)		80			"
		85			"
		90			"
5" dia Stainless Steel		95			"
Casing (0 - 231')		100			"
		105			"
		110			Sl. gravelly Sand
		115			Sl. Muddy Sand
		120			" " "
		125			" " "
		130			" " "
		135			Muddy Sand
		140			Sl. Muddy Sand
		145			Sand
		150			Sl. Muddy Sand
		155			Muddy Sand
		160			Sand
		165			Sl. Muddy Sand

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413202.0065

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-24 Sheet 2 of 2

Location _____ Project _____

Logged by _____ Date Well Started 2/23/87

Reviewed by _____ Date _____ Date Well Completed 4/10/87

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
			170			Muddy Sand
			175			" "
			180			" "
			185			Caliche
			190			"
Granular Bentonite, lower			195			Sl. Muddy Gravelly Sand
placement depth unknown			200			Sl. Muddy, Sl. Gravelly Sand
			205			Muddy Sand
			210			Sandy Mud
			215			" "
5-in dia stainless steel			220			Muddy Sand
casing			225			" "
10-slot ? Stainless steel			230			" "
Screen (251-231')			235			" "
Artificial sand pack			240			Muddy Sandy Gravel
placement depths unknown			245			Sandy Gravel
			250			" "
			255			" "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

WELL COMPLETION SUMMARY

Project
Location 11-12 Crib
Drilling Co.
Driller McDonald / Swain
Other (companies)
Geologist(s)

Well No. 299-W22-23 Temp. Well No.
Coordinates
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Hand tool: 0-30', 41-52', 175-300'; Drive Barrel: 30-41', 52-175'
Drilling Fluid Water
Other

COMPLETION DATA

Drilled Depth 300'
Completed Depth 300'
Date Started 7/28/60
Date Completed 8/10/60
Static Water Level/Date 221' (8/5/60)

OTHER (check if performed)

- ___ Well Abandonment
- ___ Well Development
- ___ Aquifer Testing
- ___ Geophysical Log(s)
- ___ Lock and Cap
- ___ Downhole TV Inspection
- ___ Driller's Logs
- ___ Pad
- ___ Guardposts
- ___ Protective Casing

SCREEN

Type	Outer Diameter	Length	Slot Size	Interval
[illegible]			[illegible]	[illegible] - 300

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
[illegible]	8"		0 - [illegible]

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
	-		
	-		
	-		
	-		
	-		
	-		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

[illegible] data also available

Reviewed by Date Depths are below land surface unless noted.

SST

9413203.0067

AS-BUILT DIAGRAM

Boring or Well Number 299-W22-23 Sheet 1 of 2

Location _____ Project _____

Logged by _____ Date Well Started 7/28/60

Reviewed by _____ Date _____ Date Well Completed 8/10/60

Drill Bit ▼ | Sample Method ▼ Geol. from Sieve Sam

Well Construction Data: Description	Construction Diagram	Depth in Feet	Geologic/Hydrologic Data: Lithologic Diagram	Lithologic Description
		5		Sl. Muddy Sand
		10		" " "
		15		Muddy Sand
		20		" "
8" dia. Carbon Steel Casing		25		Sl. gravelly Sl. Muddy Sand
(0 - 302')		30		Sl. Muddy Sand
		35		Sand
		40		"
		45		Sl. Muddy Sand
		50		Sl. Gravelly Sl. Muddy Sand
		55		Sl. Muddy Sand
		60		Gravelly Sand
		65		Sand
		70		Sand
		75		[illegible]
		80		Sand
		85		"
		90		Muddy Sand
		95		Sl. Muddy Sand
		100		Muddy Sand
		105		Sand
		110		Muddy Sand
		115		Sl. Muddy Sand
		120		" " "
		125		" " "
		130		" " "
		135		Muddy Sand
		140		" "
		145		Sl. Muddy Sand
		150		" " "
		155		Sand
		160		Muddy Sand
		165		Sandy Mud

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0068

AS-BUILT DIAGRAM

Boring or Well Number 299-W22-23 Sheet 2 of 2

Location _____ Project _____

Logged by _____ Date Well Started 7/28/60

Reviewed by _____ Date _____ Date Well Completed 8/10/60

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method	Est. From Sieve Data	
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
			170	○		Sandy Mud
			175	○		Muddy Sand
7-in dia Carbon Steel			180	•		" "
Casing (0-302')			185	•		31 Gravelly Sandy Mud
			190	•		Sandy Mud
			195	•		Muddy Sand
			200	•		" "
			205	•		" "
Perforations (200-302')			210	•		" "
[illegible]			215	•		Sandy Mud
			220	•		" "
WL (2/5/60 221'			225	•		" "
			230	•		" "
			235	•		Muddy Sand
			240	•		Gravelly Muddy Sand
			245	•		Muddy Sandy Gravel
			250	•		" " "
			255	•		Gravelly Muddy Sand
			260	•		31 Muddy Gravelly Sand
			265			[illegible]
			270	•		Muddy Sandy Gravel
			275	•		" " "
			280	•		" " "
			285	•		31 Muddy Gravelly Sand
			290	•		" " "
			295	•		" " "
			300	•		" " "

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ·· ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413203.0069

WELL COMPLETION SUMMARY

Project HAP 655 JAJ 647
Location
Drilling Co. JAJ (647)
Driller EVANS
Other (companies)
Geologist(s)

Well No. 299-W23-11 Temp. Well No.
Coordinates N 35568 W 76725
Elevation: Casing 664.14 Brass Marker

DRILLING METHOD

Drilling Method(s) CABLE TOOL
HT = 165' on ?
Drilling Fluid water
Other

COMPLETION DATA

Drilled Depth 235'
Completed Depth 235'
Date Started 10-10-72
Date Completed 11-8-72
Static Water Level/Date ~~101'/5-83~~ (Hanford Wells) 195'

OTHER (check if performed)

___ Well Abandonment	___ Downhole TV Inspection
___ Well Development	✓ Driller's Logs
___ Aquifer Testing	___ Pad
___ Geophysical Log(s)	___ Guardposts
___ Lock and Cap	___ Protective Casing

PERFORATED — 6" SCREEN 65' — 165-230'

Type	Outer Diameter	Length	Slot Size	Interval
PERFORATED (1972)*	6 5/8"	45'		50' - 95'
" " *	6 5/8" ~~8m~~	30'		0 - 30'

1983 Maintanence work indicated Mills Knife, 2 cuts/round 1 round/ft

TEMPORARY CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
			-
			-
			-

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon Steel	6"		0 - 235'
LINER (Carbon Steel?)	5"		0 - 105'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
GROUT (1972)	0 - 105'	158 gal	158 gal
	-		
	-		
	-		
	-		
	-		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

"Water in hole at 215'" 11/1/72
"I was building up a bit and a spark went downhole and it exploded." 11/2/72
"There was 20% explosive level at 10' below ground level." 11/3/72

Reviewed by Date Depths are below land surface unless noted.

AS-BUILT DIAGRAM

Boring or Well Number 299-W23-11 Sheet 1 of 2

Location _____ Project _____

Logged by _____ Date Well Started 10-10-72

Reviewed by _____ Date _____ Date Well Completed 11-8-72

Drill Bit ▼ Sample Method ▼ Data from Sieving

Description	Construction Diagram	Depth in Feet	Lithologic Diagram	Lithologic Description
5" liner 0'-105'		5		gravelly Sand
6" carbon steel		10		slightly muddy gravelly sand
		15		muddy sandy gravel
Grout 0'-105'		20		gravelly Sand
		25		slightly muddy gravel, Sand
Perforations, 0'-30'		30		gravelly Sand
		35		Sand
		40		slightly gravelly Sand
		45		slightly muddy Sand
		50		Sand
		55		Slightly muddy Sand
		60		muddy Sand
Perforations, 50-95		65		Slightly muddy Sand
		70		"
		75		"
		80		"
		85		"
		90		muddy sandy Gravel
		95		muddy sand
		100		Sandy Gravel
		105		"
		110		sandy Mud
		115		muddy Sand CaCO3
		120		muddy Sand CaCO3
		125		gravelly muddy Sand CaCO3
		130		sandy Mud CaCO3
		135		muddy Sand
		140		"
		145		slightly muddy gravelly Sand
		150		muddy sandy Gravel
		155		gravelly Sand
		160		slightly muddy Sand
		165		Sandy Gravel

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

9413202.0071

AS-BUILT DIAGRAM

Boring or Well Number 299-W23-11 Sheet 2 of 2

Location _____ Project _____

Logged by _____ Date Well Started 10-10-72

Reviewed by _____ Date _____ Date Well Completed 11-7-72

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		
Description	Construction Diagram	▼	165	▼	Lithologic Diagram	Lithologic Description
			170	•		slightly muddy Sand
			175	•		gravelly Sand
			180	•		slightly muddy gravelly Sand
			185	•		sandy Gravel
Perforated 165'-230'			190	•		slightly muddy gravelly Sand
			195	•		slightly muddy gravelly Sand
			200	•		gravelly muddy Sand
			205	•		muddy Sand & Gravel
			210	•		slightly muddy Sand
			215	•		slightly gravelly & muddy Sand
			220	•		slightly muddy Sand
			225	•		slightly gravelly & muddy Sand
			230	•		slightly muddy Sand
			235	•		slightly muddy gravelly Sand

Drill Bit/Sample Method Used:
☐ Rotary ☒ Air Rotary ■ Mud Rotary ▲ Air Percussion △ Back Hoe ◇ Auger ○ Drive Barrel ● Hard Tool ⊕ Split-Barrel

A-1800-186 (05/90)

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W14-7	NOT LOGGED							
U	299-W14-63	NOT LOGGED							
U	299-W18-15	NAT. GAMMA	9/23/86	3	244	PNL	E.J. JENSEN	NG 001	ç
U	299-W18-18	NOT LOGGED							
U	299-W18-19	NOT LOGGED							
U	299-W18-25	NAT. GAMMA	10/29/90	3.4	136	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-25	NAT. GAMMA	11/29/90	130	214.6	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-27	GROSS GAMMA	4/18/91	4	160	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-27	GROSS GAMMA	5/7/91	130	237	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-28	GROSS GAMMA	4/19/91	2.7	147.4	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-28	GROSS GAMMA	5/9/91	115	228.7	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-29	GROSS GAMMA	4/17/91	4	135	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-30	GROSS GAMMA	9/23/91	1	130.7	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-30	GROSS GAMMA	10/7/91	100	232.7	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-31	GROSS GAMMA	9/12/91	0.4	128.3	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-31	GROSS GAMMA	10/3/91	100	227.2	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W18-51	NAT. GAMMA	5/8/63	0	128	PNL	V.L. McGHAN		å
U	299-W18-52	NAT. GAMMA	5/8/63	0	131	PNL	V.L. McGHAN		å
U	299-W18-53	NAT. GAMMA	5/8/63	0	148	PNL	V.L. McGHAN		å
U	299-W18-54	NAT. GAMMA	5/8/63	0	145	PNL	V.L. McGHAN		å
U	299-W18-55	NAT. GAMMA	5/8/63	0	76	PNL	V.L. McGHAN		å

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W18-90	NOT LOGGED							
U	299-W18-91	NOT LOGGED							
U	299-W18-92	NOT LOGGED							
U	299-W18-100	NOT LOGGED							
U	299-W18-101	NOT LOGGED							
U	299-W18-102	NOT LOGGED							
U	299-W18-103	NOT LOGGED							
U	299-W18-104	NOT LOGGED							
U	299-W18-105	NOT LOGGED							
U	299-W18-109	NOT LOGGED							
U	299-W18-110	NOT LOGGED							
U	299-W18-113	NOT LOGGED							
U	299-W18-114	NOT LOGGED							
U	299-W18-115	NOT LOGGED							
U	299-W18-116	NOT LOGGED							
U	299-W18-117	NOT LOGGED							
U	299-W18-118	NOT LOGGED							
U	299-W18-119	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W18-120	NOT LOGGED							
U	299-W18-121	NOT LOGGED							
U	299-W18-122	NOT LOGGED							
U	299-W18-123	NOT LOGGED							
U	299-W18-124	NOT LOGGED							
U	299-W18-125	NOT LOGGED							
U	299-W18-126	NOT LOGGED							
U	299-W18-127	NOT LOGGED							
U	299-W18-128	NOT LOGGED							
U	299-W18-129	NOT LOGGED							
U	299-W18-130	NOT LOGGED							
U	299-W18-131	NOT LOGGED							
U	299-W18-132	NOT LOGGED							
U	299-W18-133	NOT LOGGED							
U	299-W18-134	NOT LOGGED							
U	299-W18-135	NOT LOGGED							
U	299-W18-136	NOT LOGGED							
U	299-W18-137	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W18-138	NOT LOGGED							
U	299-W18-139	NOT LOGGED							
U	299-W18-140	NOT LOGGED							
U	299-W18-141	NOT LOGGED							
U	299-W18-142	NOT LOGGED							
U	299-W18-143	NOT LOGGED							
U	299-W18-144	NOT LOGGED							
U	299-W18-145	NOT LOGGED							
U	299-W18-146	NOT LOGGED							
U	299-W18-147	NOT LOGGED							
U	299-W18-148	NOT LOGGED							
U	299-W18-176	NOT LOGGED							
U	299-W18-177	NAT. GAMMA	6/24/86	2	86	PNL	E.J. JENSEN	NG 001	Ç
U	299-W18-177	NAT. GAMMA	9/16/87	5	87	PNL	V.L. McGHAN	NG 001	Ç
U	299-W18-178	NOT LOGGED							
U	299-W18-186	NOT LOGGED							
U	299-W18-187	NOT LOGGED							
U	299-W18-188	NOT LOGGED							
U	299-W18-195	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W18-196	NOT LOGGED							
U	299-W18-199	NOT LOGGED							
U	299-W18-200	NOT LOGGED							
U	299-W18-207	NOT LOGGED							
U	299-W18-208	NOT LOGGED							
U	299-W18-209	NOT LOGGED							
U	299-W18-210	NOT LOGGED							
U	299-W18-211	NOT LOGGED							
U	299-W18-212	NOT LOGGED							
U	299-W18-213	NOT LOGGED							
U	299-W18-214	NOT LOGGED							
U	299-W18-215	NOT LOGGED							
U	299-W18-217	NOT LOGGED							
U	299-W18-218	NOT LOGGED							
U	299-W18-219	NOT LOGGED							
U	299-W18-220	NOT LOGGED							
U	299-W19-1	NAT. GAMMA	2/28/58	0	186	PNL	V.L. McGHAN		μ
U	299-W19-1	NAT. GAMMA	7/24/59	0	200	PNL	V.L. McGHAN		μ
U	299-W19-1	TEMP.	3/2/62	201	280	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	5/3/62	202	280	PNL	V.L. McGHAN		®

74

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-1	TEMP.	7/12/62	201	280	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	9/6/62	202	281	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	11/6/62	202	280	PNL	V.L. McGHAN		Δ
U	299-W19-1	TEMP.	1/17/63	201	281	PNL	V.L. McGHAN		®
U	299-W19-1	NAT. GAMMA	5/3/63	0	275	PNL	V.L. McGHAN		å
U	299-W19-1	TEMP.	8/2/63	201	276	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	12/26/63	200	214	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	12/30/64	198	250	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	5/10/67	194	250	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	4/10/68	196	250	PNL	V.L. McGHAN		®
U	299-W19-1	TEMP.	2/21/74	210	248	PNL	V.L. McGHAN		®
U	299-W19-1	NAT. GAMMA	5/19/87	3	207	PNL	V.L. McGHAN	NG 001	Ç
U	299-W19-1	NEUTRON	5/19/87	3	208	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-1	DENSITY	5/19/87	1	207	PNL	V.L. McGHAN	GG-001	Ω
U	299-W19-2	NAT. GAMMA	3/3/58	0	221	PNL	V.L. McGHAN		µ
U	299-W19-2	NAT. GAMMA	7/24/59	0	228	PNL	V.L. McGHAN		µ
U	299-W19-2	TEMP.	3/2/62	237	254	PNL	V.L. McGHAN		®
U	299-W19-2	TEMP.	5/3/62	239	254	PNL	V.L. McGHAN		®
U	299-W19-2	TEMP.	9/6/62	239	254	PNL	V.L. McGHAN		®
U	299-W19-2	TEMP.	11/6/62	238	256	PNL	V.L. McGHAN		®
U	299-W19-2	TEMP.	1/17/63	237	356	PNL	V.L. McGHAN		®
U	299-W19-2	NAT. GAMMA	5/6/63	0	254	PNL	V.L. McGHAN		å
U	299-W19-2	TEMP.	8/2/63	236	254	PNL	V.L. McGHAN		®
U	299-W19-2	TEMP.	12/26/63	235	250	PNL	V.L. McGHAN		®
U	299-W19-2	NAT. GAMMA	7/2/65	0	245	PNL	V.L. McGHAN		å
U	299-W19-2	TEMP.	5/10/67	228	243	PNL	V.L. McGHAN		®
U	299-W19-2	NAT. GAMMA	2/16/68	0	239	PNL	V.L. McGHAN		å
U	299-W19-2	TEMP.	4/10/68	230	250	PNL	V.L. McGHAN		®
U	299-W19-2	NAT. GAMMA	3/26/70	0	242	PNL	V.L. McGHAN		å
U	299-W19-2	TEMP.	2/21/74	231	239	PNL	V.L. McGHAN		®
U	299-W19-2	NAT. GAMMA	5/13/76	4	239	PNL	V.L. McGHAN		ç
U	299-W19-2	DENSITY	6/23/76	3	239	PNL	V.L. McGHAN		Ω
U	299-W19-2	NEUTRON	2/22/77	5	239	PNL	V.L. McGHAN		≈
U	299-W19-3	NAT. GAMMA	2/28/58	0	212	PNL	V.L. McGHAN		µ

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-3	NAT. GAMMA	7/24/59	0	238	PNL	V.L. McGHAN		µ
U	299-W19-3	TEMP.	3/2/62	238	283	PNL	V.L. McGHAN		®
U	299-W19-3	TEMP.	5/3/62	233	283	PNL	V.L. McGHAN		®
U	299-W19-3	NAT. GAMMA	5/6/63	252	252	PNL	V.L. McGHAN		å
U	299-W19-3	NEUTRON	4/9/65	0	226	PNL	V.L. McGHAN		√
U	299-W19-3	NAT. GAMMA	7/15/65	0	237	PNL	V.L. McGHAN		å
U	299-W19-3	NAT. GAMMA	2/23/68	0	252	PNL	V.L. McGHAN		å
U	299-W19-3	NEUTRON	6/6/68	0	222	PNL	V.L. McGHAN		√
U	299-W19-3	NAT. GAMMA	2/2/70	0	205	PNL	V.L. McGHAN		å
U	299-W19-3	NAT. GAMMA	2/18/70	0	252	PNL	V.L. McGHAN		å
U	299-W19-3	TEMP.	2/21/74	228	244	PNL	V.L. McGHAN		®
U	299-W19-3	NAT. GAMMA	5/14/76	4	242	PNL	V.L. McGHAN		ç
U	299-W19-3	DENSITY	6/23/76	2	242	PNL	V.L. McGHAN		Ω
U	299-W19-3	DENSITY	11/19/76	4	244	PNL	V.L. McGHAN		∫
U	299-W19-3	NEUTRON	2/23/77	4	244	PNL	V.L. McGHAN		≈
U	299-W19-3	NAT. GAMMA	3/9/85	5	246	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-3	NEUTRON	3/9/85	5	245	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-3	NAT. GAMMA	4/18/85	2	241	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-4	TEMP.	2/1/62	259	361	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	3/2/62	259	423	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	4/26/62	261	513	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	8/22/62	259	514	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	11/6/62	260	514	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	1/17/63	259	514	PNL	V.L. McGHAN		®
U	299-W19-4	NAT. GAMMA	5/6/63	0	513	PNL	V.L. McGHAN		å
U	299-W19-4	TEMP.	8/2/63	259	503	PNL	V.L. McGHAN		®
U	299-W19-4	NEUTRON	1/28/64	0	261	PNL	V.L. McGHAN		√
U	299-W19-4	NEUTRON	2/6/64	0	258	PNL	V.L. McGHAN		√
U	299-W19-4	NEUTRON	2/11/64	0	257	PNL	V.L. McGHAN		√
U	299-W19-4	TEMP.	1/6/65	261	469	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	2/18/65	257	440	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	2/23/65	260	469	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	5/10/67	257	469	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	11/11/68	257	470	PNL	V.L. McGHAN		®
U	299-W19-4	TEMP.	2/21/74	256	463	PNL	V.L. McGHAN		®

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-7	NAT. GAMMA	1/9/69	0	224	PNL	V.L. McGHAN		å
U	299-W19-7	NEUTRON	1/9/69	0	214	PNL	V.L. McGHAN		√
U	299-W19-7	NAT. GAMMA	3/3/70	0	221	PNL	V.L. McGHAN		å
U	299-W19-7	NAT. GAMMA	5/13/76	4	222	PNL	V.L. McGHAN		ç
U	299-W19-7	DENSITY	6/23/76	4	222	PNL	V.L. McGHAN		Ω
U	299-W19-7	NEUTRON	2/24/77	4	222	PNL	V.L. McGHAN		≈
U	299-W19-8	NAT. GAMMA	9/22/71	0	302	PNL	V.L. McGHAN		å
U	299-W19-8	NEUTRON	9/22/71	1	245	PNL	V.L. McGHAN		√
U	299-W19-8	NAT. GAMMA	4/5/85	5	578	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-8	NEUTRON	4/5/85	2	578	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-9	NAT. GAMMA	3/9/85	5	105	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-9	NEUTRON	3/9/85	5	104	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-9	CALIPER	4/2/85	4	105	PNL	V.L. McGHAN		ß
U	299-W19-9	CALIPER	4/12/85	4	105	PNL	V.L. McGHAN		ß
U	299-W19-9	NAT. GAMMA	5/9/85	5	284	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-9	CALIPER	5/9/85	6	281	PNL	V.L. McGHAN		ß
U	299-W19-10	DENSITY	6/3/76	2	514	PNL	V.L. McGHAN		Ω
U	299-W19-10	NEUTRON	2/24/77	5	468	PNL	V.L. McGHAN		≈
U	299-W19-10	TEMP.	6/24/81	200	467	PNL	R.G. PARKHURST		Σ
U	299-W19-10	TEMP.	5/18/82	300	675	PNL			∂
U	299-W19-11	NAT. GAMMA	3/9/85	5	249	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-11	NEUTRON	3/9/85	3	250	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-11	NAT. GAMMA	4/18/85	5	249	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-12	NOT LOGGED							
U	299-W19-13	NAT. GAMMA	3/14/85	5	250	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-13	NEUTRON	3/14/85	5	250	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-13	NAT. GAMMA	4/18/85	2	241	PNL	E.J. JENSEN	CG 27A97	LOG MISSING
U	299-W19-14	NAT. GAMMA	3/14/85	6	245	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-14	NEUTRON	3/14/85	6	247	PNL	V.L. McGHAN	CN 27U5A7	≈

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-15	NAT. GAMMA	4/2/85	3	167	PNL	V.L. McGHAN	CG 27A97	ç
U	299-W19-15	NEUTRON	4/2/85	4	167	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-15	DENSITY	4/2/85	1	166	PNL	E.J. JENSEN	GG-001	Ω
U	299-W19-15	NAT. GAMMA	5/24/85	2	283	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-15	NEUTRON	5/24/85	3	282	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-15	DENSITY	5/24/85	1	285	PNL	E.J. JENSEN	GG-001	Ω
U	299-W19-16	NAT. GAMMA	4/15/85	2	169	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-16	NEUTRON	4/15/85	2	168	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-16	DENSITY	4/15/85	2	169	PNL	E.J. JENSEN	GG-001	Ω
U	299-W19-16	NAT. GAMMA	4/20/85	6	200	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-16	NEUTRON	4/20/85	6	200	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-16	DENSITY	4/20/85	3	200	PNL	E.J. JENSEN	GG-001	Ω
U	299-W19-16	NAT. GAMMA	5/24/85	4	277	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-16	NEUTRON	5/24/85	4	277	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-16	DENSITY	5/24/85	2	273	PNL	E.J. JENSEN	GG-001	Ω
U	299-W19-16	NAT. GAMMA	6/12/85	2	285	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-17	NAT. GAMMA	12/10/85	2	355	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-18	NAT. GAMMA	11/27/85	5	356	PNL	E.J. JENSEN	CG 27A97	ç
U	299-W19-19	DENSITY	1/26/87	1	248	PNL	E.J. JENSEN	GG-48	Ω
U	299-W19-19	NEUTRON	1/26/87	3	249	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-19	NAT. GAMMA	1/26/87	2	249	PNL	M. FRESHLEY	CG 27A97	ç
U	299-W19-20	NAT. GAMMA	6/2/86	2	249	PNL	E.J. JENSEN	NG 001	ç
U	299-W19-20	NEUTRON	6/2/86	3	250	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-20	NAT. GAMMA	6/17/86	2	248	PNL	E.J. JENSEN	NG 001	ç
U	299-W19-21	NAT. GAMMA	6/2/86	2	142	PNL	E.J. JENSEN	NG 001	ç
U	299-W19-21	NEUTRON	6/2/86	4	143	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-21	NAT. GAMMA	7/8/86	2	223	PNL	E.J. JENSEN	NG 001	ç
U	299-W19-22	NAT. GAMMA	6/2/86	2	137	PNL	E.J. JENSEN	NG 001	çç
U	299-W19-22	NEUTRON	6/2/86	3	137	PNL	E.J. JENSEN	CN 27U5A7	≈

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-22	NAT. GAMMA	6/17/86	2	130	PNL	E.J. JENSEN	NG 001	çç
U	299-W19-23	NAT. GAMMA	3/5/87	5	252	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-23	NEUTRON	3/9/87	3	252	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-23	DENSITY	3/9/87	1	252	PNL	V.L. McGHAN	GG-48	Ω
U	299-W19-23	NAT. GAMMA	3/25/87	2	251	PNL	E.J. JENSEN	NG 001	çç
U	299-W19-23	NEUTRON	3/25/87	3	253	PNL	E.J. JENSEN	CN 27U5A7	≈
U	299-W19-23	DENSITY	3/25/87	0	252	PNL	E.J. JENSEN	GG-48	Ω
U	299-W19-24	NAT. GAMMA	3/12/87	2	251	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-24	NEUTRON	3/12/87	2	251	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-24	DENSITY	3/12/87	0	251	PNL	V.L. McGHAN	GG-48	Ω
U	299-W19-24	NAT. GAMMA	4/16/87	1	249	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-24	NEUTRON	4/16/87	2	249	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-24	DENSITY	4/16/87	1	249	PNL	V.L. McGHAN	GG-001	Ω
U	299-W19-25	NAT. GAMMA	4/16/87	2	246	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-26	NAT. GAMMA	4/7/87	0	147	PNL	V.L. McGHAN	NG 001	ççç
U	299-W19-26	NAT. GAMMA	4/16/87	2	248	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-26	NEUTRON	4/16/87	2	248	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-26	DENSITY	4/16/87	1	248	PNL	V.L. McGHAN	GG-001	Ω
U	299-W19-27	NAT. GAMMA	4/24/87	4	225	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-28	NAT. GAMMA	6/6/89	2	179	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W19-28	NAT. GAMMA	11/6/89	0.8	254.3	PNL	V.L. McGHAN	CG 27A97	WHC
U	299-W19-29	NAT. GAMMA	6/8/89	3	188	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W19-29	NAT. GAMMA	6/27/89	140	255	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W19-29	NAT. GAMMA	11/6/89	2.5	254.7	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W19-29	CALIPER	11/6/89	2.5	254.7	PNL	V.L. McGHAN		WHC
U	299-W19-30	NAT. GAMMA	4/27/90	3.4	69.2	PNL	PEARSON &McGHAN	CG 27A97	œ WHC
U	299-W19-31	NAT. GAMMA	10/22/90	3.1	136.3	PNL	A.W. PEARSON	CG 27A97	WHC

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-31	NAT. GAMMA	12/6/90	130	224.5	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W19-32	NAT. GAMMA	10/17/90	3.8	143.1	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W19-32	NAT. GAMMA	11/13/90	130	216.6	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W19-51	NOT LOGGED							
U	299-W19-52	NOT LOGGED							
U	299-W19-53	NAT. GAMMA	5/8/63	0	148	PNL	V.L. McGHAN		å
U	299-W19-54	NAT. GAMMA	5/8/63	0	148	PNL	V.L. McGHAN		å
U	299-W19-55	NOT LOGGED							
U	299-W19-69	NOT LOGGED							
U	299-W19-70	NAT. GAMMA	12/3/76	4	82	PNL	V.L. McGHAN		çç
U	299-W19-71	NAT. GAMMA	12/3/76	5	64	PNL	V.L. McGHAN		çç
U	299-W19-72	NOT LOGGED							
U	299-W19-73	NOT LOGGED							
U	299-W19-74	NOT LOGGED							
U	299-W19-75	NOT LOGGED							
U	299-W19-76	NOT LOGGED							
U	299-W19-89	NAT. GAMMA	2/5/87	3	157	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-90	NAT. GAMMA	2/5/87	3	158	PNL	V.L. McGHAN	NG 001	çç
U	299-W19-91	NAT. GAMMA	4/7/87	2	113	PNL	V.L. McGHAN	NG 001	ççç

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W19-91	NEUTRON	4/7/87	2	113	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-91	DENSITY	4/7/87	1	113	PNL	V.L. McGHAN	GG-001	Ω
U	299-W19-92	NAT. GAMMA	4/7/87	2	120	PNL	V.L. McGHAN	NG 001	ÇÇ
U	299-W19-92	NEUTRON	4/7/87	3	120	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-92	DENSITY	4/7/87	1	120	PNL	V.L. McGHAN	GG-48	Ω
U	299-W19-93	NAT. GAMMA	5/19/87	2	112	PNL	V.L. McGHAN	NG 001	ÇÇ
U	299-W19-93	NEUTRON	5/19/87	2	112	PNL	V.L. McGHAN	CN 27U5A7	≈
U	299-W19-93	DENSITY	5/19/87	1	112	PNL	V.L. McGHAN	GG-001	Ω
U	299-W21-51	NOT LOGGED							
U	299-W21-52	NOT LOGGED							
U	299-W21-53	NOT LOGGED							
U	299-W21-54	NOT LOGGED							
U	299-W21-55	NOT LOGGED							
U	299-W21-56	NOT LOGGED							
U	299-W21-57	NOT LOGGED							
U	299-W21-58	NOT LOGGED							
U	299-W21-59	NOT LOGGED							
U	299-W21-60	NOT LOGGED							
U	299-W21-61	NOT LOGGED							
U	299-W21-62	NOT LOGGED							
U	299-W21-63	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W21-64	NOT LOGGED							
U	299-W21-65	NOT LOGGED							
U	299-W21-66	NOT LOGGED							
U	299-W21-67	NOT LOGGED							
U	299-W21-68	NOT LOGGED							
U	299-W21-69	NOT LOGGED							
U	299-W21-70	NOT LOGGED							
U	299-W21-71	NOT LOGGED							
U	299-W21-72	NOT LOGGED							
U	299-W21-73	NOT LOGGED							
U	299-W21-74	NOT LOGGED							
U	299-W21-75	NOT LOGGED							
U	299-W21-76	NOT LOGGED							
U	299-W21-77	NOT LOGGED							
U	299-W21-78	NOT LOGGED							
U	299-W21-79	NOT LOGGED							
U	299-W21-80	NOT LOGGED							
U	299-W21-81	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W21-82	NOT LOGGED							
U	299-W21-83	NOT LOGGED							
U	299-W22-22	NAT. GAMMA	5/6/63	0	297	PNL	V.L. McGHAN		å
U	299-W22-22	NEUTRON	4/9/65	0	206	PNL	V.L. McGHAN		√
U	299-W22-22	NAT. GAMMA	7/2/65	0	297	PNL	V.L. McGHAN		å
U	299-W22-22	NAT. GAMMA	2/23/68	0	297	PNL	V.L. McGHAN		å
U	299-W22-22	NAT. GAMMA	3/27/70	0	297	PNL	V.L. McGHAN		å
U	299-W22-22	NAT. GAMMA	2/23/76	4	297	PNL	V.L. McGHAN		çç
U	299-W22-22	DENSITY	6/23/76	3	297	PNL	V.L. McGHAN		Ω
U	299-W22-22	NAT. GAMMA	12/2/76	4	229	PNL	V.L. McGHAN		çç
U	299-W22-22	NEUTRON	2/22/77	4	298	PNL	V.L. McGHAN		≈
U	299-W22-22	NAT. GAMMA	9/29/82	6	299	PNL	V.L. McGHAN	NG001	çç
U	299-W22-22	NEUTRON	9/29/82	8	299	PNL	V.L. McGHAN	CGN 27U5A329	≈
U	299-W22-23	NAT. GAMMA	5/6/63	0	234	PNL	V.L. McGHAN		å
U	299-W22-23	NEUTRON	4/9/65	0	226	PNL	V.L. McGHAN		√
U	299-W22-23	NAT. GAMMA	7/2/65	0	230	PNL	V.L. McGHAN		å
U	299-W22-23	NAT. GAMMA	2/23/68	0	230	PNL	V.L. McGHAN		å
U	299-W22-23	NAT. GAMMA	5/13/76	4	230	PNL	V.L. McGHAN		çç
U	299-W22-23	DENSITY	6/23/76	2	229	PNL	V.L. McGHAN		Ω
U	299-W22-23	NEUTRON	2/22/77	4	230	PNL	V.L. McGHAN	CGN 27U5A329	≈
U	299-W22-23	NAT. GAMMA	8/25/82	5	229	PNL	V.L. McGHAN	NG001	çç
U	299-W22-24	TEMP.	3/2/62	232	390	PNL	V.L. McGHAN		®
U	299-W22-24	TEMP.	5/3/62	236	564	PNL	V.L. McGHAN		®
U	299-W22-24	TEMP.	7/26/62	236	564	PNL	V.L. McGHAN		®
U	299-W22-24	TEMP.	5/10/67	231	482	PNL	V.L. McGHAN		®
U	299-W22-24	TEMP.	2/21/74	231	475	PNL	V.L. McGHAN		®
U	299-W22-28	NAT. GAMMA	3/19/64	0	234	PNL	V.L. McGHAN		å
U	299-W22-28	NEUTRON	4/9/65	0	223	PNL	V.L. McGHAN		√
U	299-W22-28	NAT. GAMMA	1/31/66	0	232	PNL	V.L. McGHAN		å
U	299-W22-28	NAT. GAMMA	2/23/68	0	230	PNL	V.L. McGHAN		å
U	299-W22-28	TEMP.	2/21/74	0	232	PNL	V.L. McGHAN		®

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W22-40	NAT. GAMMA	3/12/90	3	143	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-40	NAT. GAMMA	3/30/90	110	243	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-40	NAT. GAMMA	5/4/90	2	244.6	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-41	NAT. GAMMA	3/5/90	2.5	237	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-41	NAT. GAMMA	5/4/90	2	244.9	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-42	NAT. GAMMA	2/23/90	3.8	137.3	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-42	NAT. GAMMA	3/5/90	100	242.8	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-42	NAT. GAMMA	4/27/90	4	235.8	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-43	NAT. GAMMA	3/5/90	2.9	135	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-43	NAT. GAMMA	3/30/90	105	242	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-43	NAT. GAMMA	5/4/90	2	243.9	PNL	V.L. McGHAN	CG 27A97	œ WHC
U	299-W22-60	NAT. GAMMA	7/2/65	0	26	PNL	V.L. McGHAN		å
U	299-W22-60	NAT. GAMMA	2/23/68	0	26	PNL	V.L. McGHAN		å
U	299-W22-73	NAT. GAMMA	8/25/82	5	59	PNL	V.L. McGHAN	NG001	çç
U	299-W22-73	NEUTRON	8/25/82	8	60	PNL	V.L. McGHAN	CGN 27U5A329	≈
U	299-W22-75	NAT. GAMMA	8/25/82	5	171	PNL	V.L. McGHAN	NG001	çç
U	299-W22-75	NEUTRON	8/25/82	7	172	PNL	V.L. McGHAN	CGN 27U5A329	≈
U	299-W23-4	NAT. GAMMA	2/28/58	0	174	PNL	V.L. McGHAN		µ
U	299-W23-4	NAT. GAMMA	8/5/59	0	189	PNL	V.L. McGHAN		µ
U	299-W23-4	TEMP.	3/2/62	187	277	PNL	V.L. McGHAN		®
U	299-W23-4	TEMP.	5/3/62	187	278	PNL	V.L. McGHAN		®
U	299-W23-4	TEMP.	11/6/62	189	278	PNL	V.L. McGHAN		®
U	299-W23-4	TEMP.	1/17/63	189	277	PNL	V.L. McGHAN		®
U	299-W23-4	NAT. GAMMA	5/7/63	0	277	PNL	V.L. McGHAN		å
U	299-W23-4	TEMP.	8/26/63	188	271	PNL	V.L. McGHAN		®
U	299-W23-4	NEUTRON	4/9/65	0	184	PNL	V.L. McGHAN		√
U	299-W23-4	TEMP.	5/10/67	181	258	PNL	V.L. McGHAN		®
U	299-W23-4	NAT. GAMMA	2/22/68	0	256	PNL	V.L. McGHAN		å
U	299-W23-4	TEMP.	4/10/68	182	269	PNL	V.L. McGHAN		®

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

AAMS	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION
U	299-W23-4	NAT. GAMMA	4/8/70	0	256	PNL	V.L. McGHAN		à
U	299-W23-4	TEMP.	2/21/74	192	253	PNL	V.L. McGHAN		®
U	299-W23-4	NAT. GAMMA	2/23/76	4	257	PNL	V.L. McGHAN		çç
U	299-W23-4	DENSITY	6/24/76	4	255	PNL	V.L. McGHAN		Ω
U	299-W23-4	DENSITY	11/19/76	3	255	PNL	V.L. McGHAN		∫
U	299-W23-4	NEUTRON	2/23/77	5	257	PNL	V.L. McGHAN		≈
U	299-W23-11	TEMP.	3/4/74	189	216	PNL	V.L. McGHAN		®
U	299-W23-11	NAT. GAMMA	5/18/76	4	228	PNL	V.L. McGHAN		çç
U	299-W23-11	DENSITY	6/24/76	5	226	PNL	V.L. McGHAN		Ω
U	299-W23-11	NEUTRON	2/18/77	5	228	PNL	V.L. McGHAN		≈
U	299-W23-13	NAT. GAMMA	11/5/90	2.1	143	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W23-13	NAT. GAMMA	11/30/90	30	215.9	PNL	A.W. PEARSON	CG 27A97	WHC
U	299-W23-63	NOT LOGGED							
U	299-W23-71	NOT LOGGED							
U	299-W23-210	NOT LOGGED							
U	299-W23-228	NOT LOGGED							
U	299-W18-20	NOT LOGGED							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

Ω	Density Logs		PNL Sigma V	Big Notebook					
	200 West Area		Room 2521						
	299-W6-2 to								
	299-W26-5								
≈	Neutron Logs		PNL Sigma V	Big Notebook					
	200 West Area		Room 2521						
	299-W6-2 to								
	299-W26-5								
ç	Gamma Logs		PNL Sigma V	Big Notebook					
	200 West Area		Room 2521						
	299-W6-2 to		Contact Randy Price at WHC for data						
	299 W25-51								
çç	Same as above								
	Except composed of loose sheets screwed together								
ççç	Same as above								
	Loose sheets in plastic envelopes								
√	Neutron Logs		PNL Sigma V	Small Notebook					
	200 Area		Room 2606						
	299-E13-1 to		Bottom drawer of file cabinet						
	299-W26-3								
∫	Density		PNL Sigma V	Big Notebook					
	(w/out source)		Room 2521						
	200 West Area								
	299-W10-1 to								
	299-W23-4								
µ	Gamma Logs (Old)		PNL Sigma V	Medium Notebook					
	200 West Area		Room 2521						
	299-W6-1 to								
	299-32-77								

98

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

å	Gamma--Scintillation		PNL Sigma V	Small Notebook				
	200-West		Room 2521					
	299-W6-1 to							
	299-W26-3							
ß	Caliper Logs		PNL Sigma V	Big Notebook				
	200 East & West Areas		Room 2521					
	299-W18-24 to							
	299-E26-8							
∂	Temperature Logs		PNL Sigma V					
	200 West Area		Room 2606					
	299-W11-26		Bottom drawer of file cabinet					
	to 299-W19-10							
ƒ	Temperature-Logs		PNL Sigma V	Small Notebook				
	200 E & W		Room 2606					
	299-W6-1 to		Bottom drawer of file cabinet					
	299-E33-18							
Δ	Temperature Data from		PNL Sigma V	Medium Notebook				
	selected Monitoring Wells		Room 2606					
			Bottom drawer of file cabinet					
œ	Filed Logs		PNL Sigma V					
			Room 2606					
			Top drawer of file cabinet					
Σ	Temperature Logs		PNL Sigma V	Large Notebook				
	200 West Area		Room 2606					
	299-W11-26 to		Bottom drawer of file cabinet					
	299-W19-10							
®	Temperature Logs		PNL Sigma V	Small Notebook				
	200 West Area		Room 2606					
	299-W6-1 to		Bottom drawer of file cabinet					
	299-W26-3							

TABLE OF GEOPHYSICAL LOGS FOR U-PLANT AAMS

¥	Density--600 Area		PNL Sigma V	Large Notebook					
	699-40-1 to		Room 2606						
	699-97-51A		Top of file cabinet						
π	Gamma Scintillation		PNL Sigma V	Large Notebook					
	200 East Area		Room 2521						
	299-E25-1 to								
	299-E25-97								

DISTRIBUTION SHEET

To: Distribution

From: Environmental Engineering Group

Date: January 3, 1992

Project Title/Work Order:

U PLANT GEOLOGIC AND GEOPHYSICS DATA PACKAGE FOR THE 200 AGGREGATE AREA MANAGEMENT STUDY

EDT No.: 133108 ECN No.: N/A

Name	MSIN	With Attachment	EDT/ECN & Comment	EDT/ECN Only
K. R. Barton	K6-96	X		
J. P. Brodeur	H4-56	X		
R. W. Bryce	K6-96	X		
M. A. Chamness	K6-96	X		
J. W. Fassett	H4-56	X		
R. W. Fruland	K6-96	X		
M. J. Galgoul	H4-55	X		
D. G. Horton	H4-56	X		
R. L. Jackson	H4-56	X		
A. J. Knepp	H4-56	X		
C. J. Koisumi	H4-56	X		
S. E. Kos	H4-56	X		
G. V. Last	K6-96	X		
R. E. Lewis	K6-96	X		
A. W. Pearson	K6-96	X		
R. K. Price	H4-56	X		
N. L. Solis	H4-17	X		
G. D. Spice	H4-56	X		
S. S. Teel	~~K6-96~~	X		
T. S. Tonning (2)	H4-22	X		
Central Files	L8-04	X		

9413203.0092

THIS PAGE INTENTIONALLY
LEFT BLANK

INFORMATION RELEASE REQUEST

References: WHC-CM-3-4

Purpose

- [ ] Speech or Presentation
  - [ ] Full Paper
  - [ ] Summary
  - [ ] Abstract
  - [ ] Visual Aid
  - (Check only one suffix)
- [ ] Speakers Bureau
- [ ] Poster Session
- [ ] Videotape
- [ ] Reference
- [ ] Technical Report
- [ ] Thesis or Dissertation
- [ ] Manual
- [ ] Brochure/Flier
- [ ] Software/Database
- [ ] Controlled Document
- [x] Other Data Package

New ID Number

Existing ID Number (include revision, volume, etc.) WHC-SD-EN-DP-019, Rev. 0 - PNL-790

If previously cleared, list ID number.

Date Release Required

Title 2U Plant Geologic and Geophysics Data Package for the 200 AAMS

Unclassified Category UC- NA

Impact Level 4

Title of Journal NA

Group or Society Sponsoring NA

Date(s) of Conference or Meeting NA

City/State NA

Will proceedings be published? NA [ ] Yes [ ] No

Will material be handed out? [ ] Yes [ ] No

Title of Conference or Meeting NA

CHECKLIST FOR SIGNATORIES

Review Required per WHC-CM-3-4	Yes	No	Reviewer Name (printed)	Signature	Date
Classification/Unclassified Controlled Nuclear Information	[ ]	[x]			
Patent - General Counsel	[x]	[ ]	SWBERGLIN	SWBergLin	12/10/91
Legal - General Counsel	[x]	[ ]	SWBERGLIN	SWBergLin	12/10/91
Applied Technology/Export Controlled Information or International Program	[ ]	[x]			
WHC Program	[ ]	[x]			
Communications	[ ]	[x]			
DOE-RL Program	[ ]	[x]			
Publications Services	[ ]	[x]			
Other Program	[ ]	[x]			
References Available to Intended Audience	[x]	[ ]	F. STONE	F. Stone	12/9/91
Transmit to DOE-HQ/Office of Scientific and Technical Information	[ ]	[x]			

Information conforms to all applicable requirements. The above information is certified to be correct.

Author/Requestor (Printed/Signature) — Date 12/9/91

C. D. WITTREICH

Responsible Manager (Printed/Signature) — Date 12/9/91

for R.A. CARLSON

Intended Audience

[ ] Internal [ ] Sponsor [x] External

INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP

Stamp is required before release. Release is contingent upon resolution of mandatory comments

APPROVED FOR RELEASE — NS — 1/14/92

Date Received 12/10/91 JNG

BD-7600-062 (04/90) Part 1

9413203.0093

WHC-SD-EN-DP-010, Rev. 0
ID Number

~~Lead Author~~ REQUESTOR	Phone	MSIN	Other Author(s) or Requestor
C. D. WITTREICH	6-1862	H4-55	
Project or Program	**Lead Org Code**		**Sponsor Agency (DOE, DOT, NRC, USGS, etc.)**
ER	81222		
Editor	**Phone**	**MSIN**	**DOE/HQ Program (DP, EI, EM, NE, etc.)**
N/A			

Mandatory Comments*	Reviewer Name & Signature	Date	Resolution	Date

*Only mandatory comments are to be documented. All other comments should be made on a copy of the information submitted for review and returned to the author.

Legends/Notices/Markings

	Affix Yes	Affix No	Remove Yes	Remove No
Applied Technology	☐	☐	☐	☐
Business Sensitive Information	☐	☐	☐	☐
Computer Software Notice	☐	☐	☐	☐
Copyright License Notice	☐	☐	☐	☐
Export Controlled Information	☐	☐	☐	☐
Legal Disclaimer	☒	☐	☐	☒
Limited Disclosure	☐	☐	☐	☐
Patent Status	☐	☐	☒	☐
Predecisional Information	☐	☐	☐	☐

	Affix Yes	Affix No	Remove Yes	Remove No
Programmatic Notice	☐	☐	☐	☐
Proprietary Information	☐	☐	☐	☐
Purpose and Use	☐	☐	☒	☐
Thesis/Dissertation	☐	☐	☐	☐
Trademark Disclaimer	☐	☐	☐	☐
Unclassified Controlled Nuclear Information/Official Use Only	☐	☐	☐	☐

N/A
Responsible Manager (Printed/Signature)

RD 600 062 (04/90)
Part 1