START

0019258

94

ENGINEERING CHANGE NOTICE

1. ECN 164710

Proj. ECN

2. ECN Category (mark one)	Supplemental	[]	Change ECN	[]	Supersedure	~~[X]~~ jb	
Cancel/Void	[]	Direct Revision	[X]	Temporary	[]	Discovery	[]

3. Originator's Name, Organization, MSIN, and Telephone No. S. J. Trent/Geosciences(81232)/H4-56/6-7226		4. Date January 22, 1992
5. Project Title/No./Work Order No. 200 AGGREGATE AREA MANAGEMENT STUDY	6. Bldg./Sys./Fac. No. 450 HILLS/RHLD	7. Impact Level 4
8. Document Number Affected (include rev. and sheet no.) WHC-SD-EN-DP-019 REV. 0 18611	9. Related ECN No(s). N/A	10. Related PO No. N/A

11a. Modification Work [] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	11b. Work Package Doc. No. N/A	11c. Complete Installation Work N/A Cog. Engineer Signature & Date	11d. Complete Restoration (Temp. ECN only) N/A Cog. Engineer Signature & Date

12. Description of Change

Modification of document introduction and inclusion of geophysics data.

FEB 1992 RECEIVED EDMC

WDS Per Telecon with F. Stone

13a. Justification (mark one)	Criteria Change	[]	Environmental	[X]	Facilitate Const.	[]	
Design Error/Omission	[]	Design Improvement	[]	As-Found	[]	Const. Error/Omission	[]

13b. Justification Details

Introduction required change due to inclusion of geophysics data. Geophysics data required to be included in document to support the U plant Source Aggregate Area Management Study Report.

14. Distribution (include name, MSIN, and no. of copies)

See attached distribution sheet.

RELEASE STAMP

OFFICIAL RELEASE BY WHC 20

DATE FEB 20 1992

Sta. 21

9413204.0118

A-7900-013-2 (11/88) (EF) GEF095
Engineering Change Notice

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 164710

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[X] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision

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20. Approvals

	Signature		Date		Signature	Date
OPERATIONS AND ENGINEERING				ARCHITECT-ENGINEER		
Cog./Project Engineer	S. J. Trent	H4-56	1/24/92	PE		
Cog./Project Engr. Mgr.	R. A. Carlson	H4-55	1/27/92	QA		
QA N/A				Safety		
Safety N/A				Design		
Security				Other		
Proj. Prog./Dept. Mgr.						
Def. React. Div.						
Chem. Proc. Div.						
Def. Wst. Mgmt. Div.				DEPARTMENT OF ENERGY		
Adv. React. Dev. Div.						
Proj. Dept.						
Environ. Div.				ADDITIONAL		
IRM Dept.						
Facility Rep. (Ops.)						
Other	C. D. Wittreich	H4-55				

9413204.0119

SUPPORTING DOCUMENT

1. Total Pages ~~88~~ 90

2. Title

U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study

3. Number

WHC-SD-EN-DP-019

4. Rev No.

1

5. Key Words

Geophysics, Data Package, U Plant, AAMS

APPROVED FOR PUBLIC RELEASE

6. Author

Name: S. J. Trent

Signature 1/24/92

Organization/Charge Code 81232/PH22A

7. Abstract

2/13/92 M Gonzalez

WHC, 1991, *U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study*, WHC-SD-EN-DP-019, Rev. 1, 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.

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9. Impact Level 4

10. RELEASE STAMP

OFFICIAL RELEASE BY WHC (20)
DATE FEB 20 1992
Sta. 21

9413204.0120

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RECORD OF REVISION	(1) Document Number WHC-SD-EN-DP-019 REV. 1	Page 1

(2) Title

U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study

CHANGE CONTROL RECORD

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release (5) Cog. Engr.	(6) Cog. Mgr. Date
1 RS	(7) Replace document introduction as per ECN 164710	S. J. Trent 1/24/92	R. A. Carlson R A Carlson 1/27/92
~~2~~ WDS Per telecon w/ F. Stone 2/19/92	Add geophysics data tables as per ECN 164710	S. J. Trent 1/24/92	R. A. Carlson R A Carlson 1/27/92

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A-7320-005 (08/91) (EF) WEF168

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INTRODUCTION

This data package includes all of the geologic and geophysical information requested by the Westinghouse Hanford Company for the U Plant aggregate area. This information includes a listing of all of the boreholes within this aggregate area as defined by the Westinghouse Hanford Company and amended by the Pacific Northwest Laboratory. Geophysical data (Table 1) includes the type of log, date, and interval logged for each of the above wells, as well as the location where these data are stored. Table 2 includes the types of geologic data available for each of these wells (i.e. driller's log, geologist's log) and any other related data (sieve, $CaCO_3$ content, moisture content, and chemical analyses). Table 3 provides a summary of the well construction information each well including drill depth, completion depth, screened interval, and coordinates. As-built diagrams and well completion summary forms for these wells are provided in Appendix A.

9413204.0122

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
1	GEOPHYSICAL WELL LOG LIST									
2	200-WEST AREA	U PLANT								
3										
4	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
5									(SEE BOTTOM)	
6	299-W14-7	NOT LOGGED								
7										
8	299-W14-63	NOT LOGGED								
9										
10	299-W18-15	NAT. GAMMA	9/22/82	3	244	BATTELLE	E.J. JENSEN	NG 001	#	
11										
12	299-W18-18	NOT LOGGED								
13										
14	299-W18-19	NOT LOGGED								
15										
16	299-W18-20	NOT LOGGED								
17										
18	299-W18-25	NAT. GAMMA	10/28/86	3.4	136	BATTELLE	PEARSON	CG 27A97	WHC	
19	299-W18-25	NAT. GAMMA	11/28/86	130	214.6	BATTELLE	PEARSON	CG 27A97	WHC	
20										
21	299-W18-27	NAT. GAMMA	4/18/91	4	161	BATTELLE	PEARSON	CG 27A97	WHC	
22	299-W18-27	NAT. GAMMA	5/27/91	130	237	BATTELLE	PEARSON	CG 27A97	WHC	
23										
24	299-W18-28	NAT. GAMMA	4/19/91	3	147	BATTELLE	PEARSON	CG 27A97	WHC	
25	299-W18-28	NAT. GAMMA	5/9/91	115	228	BATTELLE	PEARSON	CG 27A97	WHC	
26										
27	299-W18-29	NAT. GAMMA	4/17/91	4	135	BATTELLE	PEARSON	CG 27A97	WHC	
28										
29	299-W18-30	NAT. GAMMA	9/23/91	1	130	BATTELLE	PEARSON	CG 27A97	WHC	
30	299-W18-30	NAT. GAMMA	10/7/91	100	232	BATTELLE	PEARSON	CG 27A97	WHC	
31										
32	299-W18-31	NAT. GAMMA	9/12/91	1	128	BATTELLE	PEARSON	CG 27A97	WHC	
33	299-W18-31	NAT. GAMMA	10/3/91	100	227	BATTELLE	PEARSON	CG 27A97	WHC	
34										
35										
36	299-W18-51	NAT. GAMMA	5/7/59	0	128	BATTELLE			*	
37										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
38	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
39									(SEE BOTTOM)	
40	299-W18-52	NAT. GAMMA	5/7/59	0	131	BATTELLE			*	
41										
42	299-W18-53	NAT. GAMMA	5/7/59	0	148	BATTELLE			*	
43										
44	299-W18-54	NAT. GAMMA	5/7/59	0	145	BATTELLE			*	
45										
46	299-W18-55	NAT. GAMMA	5/7/59	0	76	BATTELLE			*	
47										
48	299-W18-90	NOT LOGGED								
49										
50	299-W18-91	NOT LOGGED								
51										
52	299-W18-92	NOT LOGGED								
53										
54	299-W18-100	NOT LOGGED								
55										
56	299-W18-101	NOT LOGGED								
57										
58	299-W18-102	NOT LOGGED								
59										
60	299-W18-103	NOT LOGGED								
61										
62	299-W18-104	NOT LOGGED								
63										
64	299-W18-105	NOT LOGGED								
65										
66	299-W18-109	NOT LOGGED								
67										
68	299-W18-110	NOT LOGGED								
69										
70	299-W18-113	NOT LOGGED								
71										
72	299-W18-114	NOT LOGGED								
73										
74	299-W18-115	NOT LOGGED								

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
75	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
76									(SEE BOTTOM)	
77										
78	299-W18-116	NOT LOGGED								
79										
80	299-W18-117	NOT LOGGED								
81										
82	299-W18-118	NOT LOGGED								
83										
84	299-W18-119	NOT LOGGED								
85										
86	299-W18-120	NOT LOGGED								
87										
88	299-W18-121	NOT LOGGED								
89										
90	299-W18-122	NOT LOGGED								
91										
92	299-W18-123	NOT LOGGED								
93										
94	299-W18-124	NOT LOGGED								
95										
96	299-W18-125	NOT LOGGED								
97										
98	299-W18-126	NOT LOGGED								
99										
100	299-W18-127	NOT LOGGED								
101										
102	299-W18-128	NOT LOGGED								
103										
104	299-W18-129	NOT LOGGED								
105										
106	299-W18-130	NOT LOGGED								
107										
108	299-W18-131	NOT LOGGED								
109										
110	299-W18-132	NOT LOGGED								
111										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
112	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
113									(SEE BOTTOM)	
114	299-W18-133	NOT LOGGED								
115										
116	299-W18-134	NOT LOGGED								
117										
118	299-W18-135	NOT LOGGED								
119										
120	299-W18-136	NOT LOGGED								
121										
122	299-W18-137	NOT LOGGED								
123										
124	299-W18-138	NOT LOGGED								
125										
126	299-W18-139	NOT LOGGED								
127										
128	299-W18-140	NOT LOGGED								
129										
130	299-W18-141	NOT LOGGED								
131										
132	299-W18-142	NOT LOGGED								
133										
134	299-W18-143	NOT LOGGED								
135										
136	299-W18-144	NOT LOGGED								
137										
138	299-W18-145	NOT LOGGED								
139										
140	299-W18-146	NOT LOGGED								
141										
142	299-W18-147	NOT LOGGED								
143										
144	299-W18-148	NOT LOGGED								
145										
146	299-W18-176	NOT LOGGED								
147										
148	299-W18-177	NAT. GAMMA	6/23/82	2	86	BATTELLE	E.J. JENSEN	NG 001	#	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
149	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
150									(SEE BOTTOM)	
151	299-W18-177	NAT. GAMMA	9/15/83	5	87	BATTELLE	V.L. McGHAN	NG 001	#	
152										
153	299-W18-178	NOT LOGGED								
154										
155	299-W18-186	NOT LOGGED								
156										
157	299-W18-187	NOT LOGGED								
158										
159	299-W18-188	NOT LOGGED								
160										
161	299-W18-192	NOT LOGGED								
162										
163	299-W18-193	NOT LOGGED								
164										
165	299-W18-194	NOT LOGGED								
166										
167	299-W18-195	NOT LOGGED								
168										
169	299-W18-196	NOT LOGGED								
170										
171	299-W18-197	NOT LOGGED								
172										
173	299-W18-198	NOT LOGGED								
174										
175	299-W18-199	NOT LOGGED								
176										
177	299-W18-200	NOT LOGGED								
178										
179	299-W18-207	NOT LOGGED								
180										
181	299-W18-208	NOT LOGGED								
182										
183	299-W18-209	NOT LOGGED								
184										
185	299-W18-210	NOT LOGGED								

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
186	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
187									(SEE BOTTOM)	
188	299-W18-211	NOT LOGGED								
189										
190	299-W18-212	NOT LOGGED								
191										
192	299-W18-213	NOT LOGGED								
193										
194	299-W18-214	NOT LOGGED								
195										
196	299-W18-215	NOT LOGGED								
197										
198	299-W18-217	NOT LOGGED								
199										
200	299-W18-218	NOT LOGGED								
201										
202	299-W18-219	NOT LOGGED								
203										
204	299-W18-220	NOT LOGGED								
205										
206	299-W19-1	NAT. GAMMA	2/27/54	0	186	BATTELLE			&	
207	299-W19-1	NAT. GAMMA	7/23/55	0	200	BATTELLE			&	
208	299-W19-1	TEMP.	3/1/58	201	280	BATTELLE			+	
209	299-W19-1	TEMP.	5/2/58	202	280	BATTELLE			+	
210	299-W19-1	TEMP.	7/11/58	201	280	BATTELLE			+	
211	299-W19-1	TEMP.	9/5/58	202	281	BATTELLE			+	
212	299-W19-1	TEMP.	11/5/58	202	280	BATTELLE			+	
213	299-W19-1	TEMP.	1/16/59	201	281	BATTELLE			+	
214	299-W19-1	NAT. GAMMA	5/2/59	0	275	BATTELLE			*	
215	299-W19-1	TEMP.	8/1/59	201	276	BATTELLE			+	
216	299-W19-1	TEMP.	12/25/59	200	214	BATTELLE			+	
217	299-W19-1	TEMP.	12/29/60	198	250	BATTELLE				
218	299-W19-1	TEMP.	5/9/63	194	250	BATTELLE				
219	299-W19-1	TEMP.	4/9/64	196	250	BATTELLE				
220	299-W19-1	TEMP.	2/20/70	210	248	BATTELLE				
221	299-W19-1	NAT. GAMMA	5/18/83	3	207	BATTELLE	V.L. McGHAN	NG 001	#	
222	299-W19-1	NEUTRON	5/18/83	3	208	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
223	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
224									(SEE BOTTOM)	
225	299-W19-1	DENSITY	5/18/83	1	207	BATTELLE	V.L. McGHAN	GG-001	!	
226										
227	299-W19-2	TEMP.	3/2/54							
228	299-W19-2	NAT. GAMMA	3/2/54	0	221	BATTELLE			&	
229	299-W19-2	NAT. GAMMA	7/23/55	0	228	BATTELLE			&	
230	299-W19-2	TEMP.	3/1/58	237	254	BATTELLE			+	
231	299-W19-2	TEMP.	5/2/58	239	254	BATTELLE			+	
232	299-W19-2	TEMP.	9/5/58	239	254	BATTELLE			+	
233	299-W19-2	TEMP.	11/5/58	238	256	BATTELLE			+	
234	299-W19-2	TEMP.	1/16/59	237	356	BATTELLE			+	
235	299-W19-2	NAT. GAMMA	5/5/59	0	254	BATTELLE			*	
236	299-W19-2	TEMP.	8/1/59	236	254	BATTELLE			+	
237	299-W19-2	TEMP.	12/25/59	235	250	BATTELLE			+	
238	299-W19-2	NAT. GAMMA	7/1/61	0	245	BATTELLE			*	
239	299-W19-2	TEMP.	5/9/63	228	243					
240	299-W19-2	NAT. GAMMA	2/15/64	0	239	BATTELLE			*	
241	299-W19-2	TEMP.	4/9/64	230	250					
242	299-W19-2	NAT. GAMMA	3/25/66	0	242	BATTELLE			*	
243	299-W19-2	TEMP.	2/20/70	231	239					
244	299-W19-2	NAT. GAMMA	5/12/72	4	239	BATTELLE			#	
245	299-W19-2	DENSITY	6/22/72	3	239	BATTELLE			!	
246	299-W19-2	NEUTRON	2/21/73	5	239	BATTELLE			@	
247										
248	299-W19-3	NAT. GAMMA	2/27/54	0	212	BATTELLE			&	
249	299-W19-3	NAT. GAMMA	7/23/55	0	238	BATTELLE			&	
250	299-W19-3	TEMP.	3/1/58	238	283	BATTELLE			+	
251	299-W19-3	TEMP.	5/2/58	233	283	BATTELLE			+	
252	299-W19-3	NAT. GAMMA	5/5/59	252	252	BATTELLE			*	
253	299-W19-3	NEUTRON	4/8/61	0	226	BATTELLE			$	
254	299-W19-3	NAT. GAMMA	7/14/61	0	237	BATTELLE			*	
255	299-W19-3	NAT. GAMMA	2/22/64	0	252	BATTELLE			*	
256	299-W19-3	NEUTRON	6/5/64	0	222	BATTELLE			$	
257	299-W19-3	NAT. GAMMA	2/1/66	0	205	BATTELLE			*	
258	299-W19-3	NAT. GAMMA	2/17/66	0	252	BATTELLE			*	
259	299-W19-3	TEMP.	2/20/70	228	244					

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
260	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
261									(SEE BOTTOM)	
262	299-W19-3	NAT. GAMMA	5/13/72	4	242	BATTELLE			#	
263	299-W19-3	DENSITY	6/22/72	2	242	BATTELLE			!	
264	299-W19-3	DENSITY	11/18/72	4	244	BATTELLE			%	
265	299-W19-3	NEUTRON	2/22/73	4	244	BATTELLE			@	
266	299-W19-3	NAT. GAMMA	3/8/81	5	246	BATTELLE	V.L. McGHAN	CG 27A97	#	
267	299-W19-3	NEUTRON	3/8/81	5	245	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
268	299-W19-3	NAT. GAMMA	4/17/81	2	241	BATTELLE	V.L. McGHAN	CG 27A97	#	
269										
270	299-W19-4	TEMP.	1/31/58	259	361	BATTELLE			+	
271	299-W19-4	TEMP.	3/1/58	259	423	BATTELLE			+	
272	299-W19-4	TEMP.	4/25/58	261	513	BATTELLE			+	
273	299-W19-4	TEMP.	8/21/58	259	514	BATTELLE			+	
274	299-W19-4	TEMP.	11/5/58	260	514	BATTELLE			+	
275	299-W19-4	TEMP.	1/16/59	259	514	BATTELLE			+	
276	299-W19-4	NAT. GAMMA	5/5/59	0	513	BATTELLE			*	
277	299-W19-4	TEMP.	8/1/59	259	503	BATTELLE			+	
278	299-W19-4	NEUTRON	1/27/60	0	261	BATTELLE			$	
279	299-W19-4	NEUTRON	2/5/60	0	258	BATTELLE			$	
280	299-W19-4	NEUTRON	2/10/60	0	257	BATTELLE			$	
281	299-W19-4	TEMP.	1/5/61	261	469					
282	299-W19-4	TEMP.	2/17/61	257	440					
283	299-W19-4	TEMP.	2/22/61	260	469					
284	299-W19-4	TEMP.	5/9/63	257	469					
285	299-W19-4	TEMP.	11/10/64	257	470					
286	299-W19-4	TEMP.	2/20/70	256	463					
287										
288	299-W19-7	NAT. GAMMA	1/8/65	0	224	BATTELLE			*	
289	299-W19-7	NEUTRON	1/8/65	0	214	BATTELLE			$	
290	299-W19-7	NAT. GAMMA	3/2/66	0	221	BATTELLE			*	
291	299-W19-7	NAT. GAMMA	5/12/72	4	222	BATTELLE			#	
292	299-W19-7	DENSITY	6/22/72	4	222	BATTELLE			!	
293	299-W19-7	NEUTRON	2/23/73	4	222	BATTELLE			@	
294										
295	299-W19-8	NAT. GAMMA	9/21/67	0	302	BATTELLE			*	
296	299-W19-8	NEUTRON	9/21/67	1	245	BATTELLE			$	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
297	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
298									(SEE BOTTOM)	
299	299-W19-8	NAT. GAMMA	4/4/81	5	578	BATTELLE	V.L. McGHAN	CG 27A97	#	
300	299-W19-8	NEUTRON	4/4/81	2	578	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
301										
302	299-W19-9	NAT. GAMMA	3/8/81	5	105	BATTELLE	V.L. McGHAN	CG 27A97	#	
303	299-W19-9	NEUTRON	3/8/81	5	104	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
304	299-W19-9	CALIPER	4/1/81	4	105	BATTELLE			^	
305	299-W19-9	CALIPER	4/11/81	4	105	BATTELLE			^	
306	299-W19-9	NAT. GAMMA	5/8/81	5	284	BATTELLE	V.L. McGHAN	CG 27A97	#	
307	299-W19-9	CALIPER	5/8/81	6	281	BATTELLE			^	
308										
309	299-W19-10	DENSITY	6/2/72	2	514	BATTELLE			!	
310	299-W19-10	NEUTRON	2/23/73	5	468	BATTELLE			@	
311	299-W19-10	TEMP.	6/23/77	200	467	BATTELLE			▪	
312	299-W19-10	TEMP.	5/17/78	300	675	BATTELLE			▪	
313										
314	299-W19-11	NAT. GAMMA	3/8/81	5	249	BATTELLE	V.L. McGHAN	CG 27A97	#	
315	299-W19-11	NEUTRON	3/8/81	3	250	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
316	299-W19-11	NAT. GAMMA	4/17/81	5	249	BATTELLE	E.J. JENSEN	CG 27A97	#	
317										
318	299-W19-12	NOT LOGGED								
319										
320	299-W19-13	NAT. GAMMA	3/13/81	5	250	BATTELLE	V.L. McGHAN	CG 27A97	#	
321	299-W19-13	NEUTRON	3/13/81	5	250	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
322	299-W19-13	NAT. GAMMA	4/17/81	2	241	BATTELLE	E.J. JENSEN	CG 27A97		
323										
324	299-W19-14	NAT. GAMMA	3/13/81	6	245	BATTELLE	V.L. McGHAN	CG 27A97	#	
325	299-W19-14	NEUTRON	3/13/81	6	247	BATTELLE	V.L. McGHAN	CG 27A97	@	
326										
327	299-W19-15	NAT. GAMMA	4/1/81	3	167	BATTELLE	V.L. McGHAN	CG 27A97	#	
328	299-W19-15	NEUTRON	4/1/81	4	167	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
329	299-W19-15	DENSITY	4/1/81	1	166	BATTELLE	E.J. JENSEN	GG-001	!	
330	299-W19-15	NAT. GAMMA	5/23/81	2	283	BATTELLE	E.J. JENSEN	CG 27A97	#	
331	299-W19-15	NEUTRON	5/23/81	3	282	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
332	299-W19-15	DENSITY	5/23/81	1	285	BATTELLE	E.J. JENSEN	GG-001	!	
333										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
334	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
335									(SEE BOTTOM)	
336	299-W19-16	NAT. GAMMA	4/14/81	2	169	BATTELLE	E.J. JENSEN	CG 27A97	#	
337	299-W19-16	NEUTRON	4/14/81	2	168	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
338	299-W19-16	DENSITY	4/14/81	2	169	BATTELLE	E.J. JENSEN	GG-001	!	
339	299-W19-16	NAT. GAMMA	4/19/81	6	200	BATTELLE	E.J. JENSEN	CG 27A97	#	
340	299-W19-16	NEUTRON	4/19/81	6	200	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
341	299-W19-16	DENSITY	4/19/81	3	200	BATTELLE	E.J. JENSEN	GG-001	!	
342	299-W19-16	NAT. GAMMA	5/23/81	4	277	BATTELLE	E.J. JENSEN	CG 27A97	#	
343	299-W19-16	NEUTRON	5/23/81	4	277	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
344	299-W19-16	DENSITY	5/23/81	2	273	BATTELLE	E.J. JENSEN	GG-001	!	
345	299-W19-16	NAT. GAMMA	6/11/81	2	285	BATTELLE	E.J. JENSEN	CG 27A97	#	
346										
347	299-W19-17	NAT. GAMMA	12/9/81	2	355	BATTELLE	E.J. JENSEN	CG 27A97	#	
348										
349	299-W19-18	NAT. GAMMA	11/26/81	5	356	BATTELLE	E.J. JENSEN	CG 27A97	#	
350										
351	299-W19-19	DENSITY	1/25/83	1	248	BATTELLE	E.J. JENSEN	GG-48	!	
352	299-W19-19	NEUTRON	1/25/83	3	249	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
353	299-W19-19	NAT. GAMMA	1/25/83	2	249	BATTELLE	M. FRESHLEY	CG 27A97	#	
354										
355	299-W19-20	NAT. GAMMA	6/1/82	2	249	BATTELLE	E.J. JENSEN	NG 001	#	
356	299-W19-20	NEUTRON	6/1/82	3	250	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
357	299-W19-20	NAT. GAMMA	6/16/82	2	248	BATTELLE	E.J. JENSEN	NG 001	#	
358										
359	299-W19-21	NAT. GAMMA	6/1/82	2	142	BATTELLE	E.J. JENSEN	NG 001	#	
360	299-W19-21	NEUTRON	6/1/82	4	143	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
361	299-W19-21	NAT. GAMMA	7/7/82	2	223	BATTELLE	E.J. JENSEN	NG 001	#	
362										
363	299-W19-22	NAT. GAMMA	6/1/82	2	137	BATTELLE	E.J. JENSEN	NG 001	# #	
364	299-W19-22	NEUTRON	6/1/82	3	137	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
365	299-W19-22	NAT. GAMMA	6/16/82	2	130	BATTELLE	E.J. JENSEN	NG 001	# #	
366										
367	299-W19-23	NAT. GAMMA	3/4/83	5	252	BATTELLE	V.L. McGHAN	NG 001	# #	
368	299-W19-23	NEUTRON	3/8/83	3	252	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
369	299-W19-23	DENSITY	3/8/83	1	252	BATTELLE	V.L. McGHAN	GG-48	!	
370	299-W19-23	NAT. GAMMA	3/24/83	2	251	BATTELLE	E.J. JENSEN	NG 001	# #	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
371	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
372									(SEE BOTTOM)	
373	299-W19-23	NEUTRON	3/24/83	3	253	BATTELLE	E.J. JENSEN	CGN 27U5A7	@	
374	299-W19-23	DENSITY	3/24/83	0	252	BATTELLE	E.J. JENSEN	GG-48	!	
375										
376	299-W19-24	NAT. GAMMA	3/11/83	2	251	BATTELLE	V.L. McGHAN	NG 001	# #	
377	299-W19-24	NEUTRON	3/11/83	2	251	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
378	299-W19-24	DENSITY	3/11/83	0	251	BATTELLE	V.L. McGHAN	GG-48	!	
379	299-W19-24	NAT. GAMMA	4/15/83	1	249	BATTELLE	V.L. McGHAN	NG 001	# #	
380	299-W19-24	NEUTRON	4/15/83	2	249	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
381	299-W19-24	DENSITY	4/15/83	1	249	BATTELLE	V.L. McGHAN	GG-001	!	
382										
383	299-W19-25	NAT. GAMMA	4/15/83	2	246	BATTELLE	V.L. McGHAN	NG 001	# #	
384										
385	299-W19-26	NAT. GAMMA	4/6/83	0	147	BATTELLE	V.L. McGHAN	NG 001	# # #	
386	299-W19-26	NAT. GAMMA	4/15/83	2	248	BATTELLE	V.L. McGHAN	NG 001	# #	
387	299-W19-26	NEUTRON	4/15/83	2	248	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
388	299-W19-26	DENSITY	4/15/83	1	248	BATTELLE	V.L. McGHAN	GG-001	!	
389										
390	299-W19-27	NAT. GAMMA	4/23/83	4	225	BATTELLE	V.L. McGHAN	NG 001	# #	
391										
392	299-W19-28	NAT. GAMMA	6/5/85	2	179	BATTELLE	McGHAN	CG 27A97	˜ WHC	
393	299-W19-28	NAT. GAMMA	11/5/85	0.8	254.3	BATTELLE	McGHAN	CG 27A97	WHC	
394										
395	299-W19-29	NAT. GAMMA	6/7/85	3	188	BATTELLE	McGHAN	CG 27A97	˜ WHC	
396	299-W19-29	NAT. GAMMA	6/26/85	140	255	BATTELLE	McGHAN	CG 27A97	˜ WHC	
397	299-W19-29	NAT. GAMMA	11/5/85	2.5	254.7	BATTELLE	McGHAN	CG 27A97	˜ WHC	
398	299-W19-29	CALIPER	11/5/85	2.5	254.7	BATTELLE	McGHAN		WHC	
399										
400	299-W19-30	NAT. GAMMA	4/26/86	3.4	69.2	BATTELLE	PEARSON &McG	CG 27A97	˜ WHC	
401										
402	299-W19-31	NAT. GAMMA	10/21/86	3.1	136.3	BATTELLE	PEARSON	CG 27A97	WHC	
403	299-W19-31	NAT. GAMMA	12/5/86	130	224.5	BATTELLE	PEARSON	CG 27A97	WHC	
404										
405	299-W19-32	NAT. GAMMA	10/16/86	3.8	143.1	BATTELLE	PEARSON	CG 27A97	WHC	
406	299-W19-32	NAT. GAMMA	11/12/86	130	216.6	BATTELLE	PEARSON	CG 27A97	WHC	
407										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
408	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
409									(SEE BOTTOM)	
410	299-W19-51	NOT LOGGED								
411										
412	299-W19-52	NOT LOGGED								
413										
414	299-W19-53	NAT. GAMMA	5/7/59	0	148	BATTELLE			*	
415										
416	299-W19-54	NAT. GAMMA	5/7/59	0	148	BATTELLE			*	
417										
418	299-W19-55	NOT LOGGED								
419										
420	299-W19-69	NOT LOGGED								
421										
422	299-W19-70	NAT. GAMMA	12/2/72	4	82	BATTELLE			# #	
423										
424	299-W19-71	NAT. GAMMA	12/2/72	5	64	BATTELLE			# #	
425										
426	299-W19-72	NOT LOGGED								
427										
428	299-W19-73	NOT LOGGED								
429										
430	299-W19-74	NOT LOGGED								
431										
432	299-W19-75	NOT LOGGED								
433										
434	299-W19-76	NOT LOGGED								
435										
436	299-W19-89	NAT. GAMMA	2/4/83	3	157	BATTELLE	V.L. McGHAN	NG 001	# #	
437										
438	299-W19-90	NAT. GAMMA	2/4/83	3	158	BATTELLE	V.L. McGHAN	NG 001	# #	
439										
440	299-W19-91	NAT. GAMMA	4/6/83	2	113	BATTELLE	V.L. McGHAN	NG 001	# # #	
441	299-W19-91	NEUTRON	4/6/83	2	113	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
442	299-W19-91	DENSITY	4/6/83	1	113	BATTELLE	V.L. McGHAN	GG-001	!	
443					120					
444	299-W19-92	NAT. GAMMA	4/6/83	2	120	BATTELLE	V.L. McGHAN	NG 001	# #	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
445	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
446									(SEE BOTTOM)	
447	299-W19-92	NEUTRON	4/6/83	3	120	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
448	299-W19-92	DENSITY	4/6/83	1	120	BATTELLE	V.L. McGHAN	GG-48	!	
449										
450	299-W19-93	NAT. GAMMA	5/18/83	2	112	BATTELLE	V.L. McGHAN	NG 001	# #	
451	299-W19-93	NEUTRON	5/18/83	2	112	BATTELLE	V.L. McGHAN	CGN 27U5A7	@	
452	299-W19-93	DENSITY	5/18/83	1	112	BATTELLE	V.L. McGHAN	GG-001	!	
453										
454	299-W21-51	NOT LOGGED								
455										
456	299-W21-52	NOT LOGGED								
457										
458	299-W21-53	NOT LOGGED								
459										
460	299-W21-54	NOT LOGGED								
461										
462	299-W21-55	NOT LOGGED								
463										
464	299-W21-56	NOT LOGGED								
465										
466	299-W21-57	NOT LOGGED								
467										
468	299-W21-58	NOT LOGGED								
469										
470	299-W21-59	NOT LOGGED								
471										
472	299-W21-60	NOT LOGGED								
473										
474	299-W21-61	NOT LOGGED								
475										
476	299-W21-62	NOT LOGGED								
477										
478	299-W21-63	NOT LOGGED								
479										
480	299-W21-64	NOT LOGGED								
481										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
482	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
483									(SEE BOTTOM)	
484	299-W21-65	NOT LOGGED								
485										
486	299-W21-66	NOT LOGGED								
487										
488	299-W21-67	NOT LOGGED								
489										
490	299-W21-68	NOT LOGGED								
491										
492	299-W21-69	NOT LOGGED								
493										
494	299-W21-70	NOT LOGGED								
495										
496	299-W21-71	NOT LOGGED								
497										
498	299-W21-72	NOT LOGGED								
499										
500	299-W21-73	NOT LOGGED								
501										
502	299-W21-74	NOT LOGGED								
503										
504	299-W21-75	NOT LOGGED								
505										
506	299-W21-76	NOT LOGGED								
507										
508	299-W21-77	NOT LOGGED								
509										
510	299-W21-78	NOT LOGGED								
511										
512	299-W21-79	NOT LOGGED								
513										
514	299-W21-80	NOT LOGGED								
515										
516	299-W21-81	NOT LOGGED								
517										
518	299-W21-82	NOT LOGGED								

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
519	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
520									(SEE BOTTOM)	
521	299-W21-83	NOT LOGGED								
522										
523	299-W22-22	NAT. GAMMA	5/5/59	0	297	BATTELLE			*	
524	299-W22-22	NEUTRON	4/8/61	0	206	BATTELLE			$	
525	299-W22-22	NAT. GAMMA	7/1/61	0	297	BATTELLE			*	
526	299-W22-22	NAT. GAMMA	2/22/64	0	297	BATTELLE			*	
527	299-W22-22	NAT. GAMMA	3/26/66	0	297	BATTELLE			*	
528	299-W22-22	NAT. GAMMA	2/22/72	4	297	BATTELLE			# #	
529	299-W22-22	DENSITY	6/22/72	3	297	BATTELLE			!	
530	299-W22-22	NAT. GAMMA	12/1/72	4	229	BATTELLE			# #	
531	299-W22-22	NEUTRON	2/21/73	4	298	BATTELLE			@	
532	299-W22-22	NAT. GAMMA	9/28/78	6	299	BATTELLE	V.L. McGHAN	NG001	# #	
533	299-W22-22	NEUTRON	9/28/78	8	299	BATTELLE	V.L. McGHAN	CGN 27U5A32	@	
534										
535	299-W22-23	NAT. GAMMA	5/5/59	0	234	BATTELLE			*	
536	299-W22-23	NEUTRON	4/8/61	0	226	BATTELLE			$	
537	299-W22-23	NAT. GAMMA	7/1/61	0	230	BATTELLE			*	
538	299-W22-23	NAT. GAMMA	2/22/64	0	230	BATTELLE			*	
539	299-W22-23	NAT. GAMMA	5/12/72	4	230	BATTELLE			# #	
540	299-W22-23	DENSITY	6/22/72	2	229	BATTELLE			!	
541	299-W22-23	NEUTRON	2/21/73	4	230	BATTELLE	V.L. McGHAN	CGN 27U5A32	@	
542	299-W22-23	NAT. GAMMA	8/24/78	5	229	BATTELLE	V.L. McGHAN	NG001	# #	
543										
544	299-W22-24	TEMP.	3/1/58	232	390	BATTELLE			+	
545	299-W22-24	TEMP.	5/2/58	236	564	BATTELLE			+	
546	299-W22-24	TEMP.	7/25/58	236	564	BATTELLE			+	
547	299-W22-24	TEMP.	5/9/63	231	482					
548	299-W22-24	TEMP.	2/20/70	231	475					
549										
550	299-W22-28	NAT. GAMMA	3/18/60	0	234	BATTELLE			*	
551	299-W22-28	NEUTRON	4/8/61	0	223	BATTELLE			$	
552	299-W22-28	NAT. GAMMA	1/30/62	0	232	BATTELLE			*	
553	299-W22-28	NAT. GAMMA	2/22/64	0	230	BATTELLE			*	
554	299-W22-28	TEMP.	2/20/70	0	232					
555										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
556	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
557									(SEE BOTTOM)	
558	299-W22-40	NAT. GAMMA	3/11/86	3	143	BATTELLE	McGHAN	CG 27A97	WHC	
559	299-W22-40	NAT. GAMMA	3/29/86	110	243	BATTELLE	McGHAN	CG 27A97	WHC	
560	299-W22-40	NAT. GAMMA	5/3/86	2	244.6	BATTELLE	McGHAN	CG 27A97	WHC	
561										
562	299-W22-41	NAT. GAMMA	3/4/86	2.5	237	BATTELLE	McGHAN	CG 27A97	WHC	
563	299-W22-41	NAT. GAMMA	5/3/86	2	244.9	BATTELLE	McGHAN	CG 27A97	WHC	
564										
565	299-W22-42	NAT. GAMMA	2/22/86	3.8	137.3	BATTELLE	McGHAN	CG 27A97	WHC	
566	299-W22-42	NAT. GAMMA	3/4/86	100	242.8	BATTELLE	McGHAN	CG 27A97	WHC	
567	299-W22-42	NAT. GAMMA	4/26/86	4	235.8	BATTELLE	McGHAN	CG 27A97	WHC	
568										
569	299-W22-43	NAT. GAMMA	3/4/86	2.9	135	BATTELLE	McGHAN	CG 27A97	WHC	
570	299-W22-43	NAT. GAMMA	3/29/86	105	242	BATTELLE	McGHAN	CG 27A97	WHC	
571	299-W22-43	NAT. GAMMA	5/3/86	2	243.9	BATTELLE	McGHAN	CG 27A97	WHC	
572										
573	299-W22-60	NAT. GAMMA	7/1/61	0	26	BATTELLE			*	
574	299-W22-60	NAT. GAMMA	2/22/64	0	26	BATTELLE			*	
575										
576	299-W22-73	NAT. GAMMA	8/24/78	5	59	BATTELLE	V.L. McGHAN	NG001	# #	
577	299-W22-73	NEUTRON	8/24/78	8	60	BATTELLE	V.L. McGHAN	CGN 27U5A32	@	
578										
579	299-W22-75	NAT. GAMMA	8/24/78	5	171	BATTELLE	V.L. McGHAN	NG001	# #	
580	299-W22-75	NEUTRON	8/24/78	7	172	BATTELLE	V.L. McGHAN	CGN 27U5A32	@	
581										
582	299-W23-4	NAT. GAMMA	2/27/54	0	174	BATTELLE			&	
583	299-W23-4	NAT. GAMMA	8/4/55	0	189	BATTELLE			&	
584	299-W23-4	TEMP.	3/1/58	187	277	BATTELLE			+	
585	299-W23-4	TEMP.	5/2/58	187	278	BATTELLE			~	
586	299-W23-4	TEMP.	11/5/58	189	278	BATTELLE			+	
587	299-W23-4	TEMP.	1/16/59	189	277	BATTELLE			+	
588	299-W23-4	NAT. GAMMA	5/6/59	0	277	BATTELLE			*	
589	299-W23-4	TEMP.	8/25/59	188	271	BATTELLE			+	
590	299-W23-4	NEUTRON	4/8/61	0	184	BATTELLE			$	
591	299-W23-4	TEMP.	5/9/63	181	258					
592	299-W23-4	NAT. GAMMA	2/21/64	0	256	BATTELLE			*	

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
593	WELL	LOG RUN	DATE	TOP	BOTTOM	LOGGED BY	LOGGER	PROBE #	LOG LOCATION	
594									(SEE BOTTOM)	
595	299-W23-4	TEMP.	4/9/64	182	269					
596	299-W23-4	NAT. GAMMA	4/7/66	0	256	BATTELLE			*	
597	299-W23-4	TEMP.	2/20/70	192	253					
598	299-W23-4	NAT. GAMMA	2/22/72	4	257	BATTELLE			# #	
599	299-W23-4	DENSITY	6/23/72	4	255	BATTELLE			!	
600	299-W23-4	DENSITY	11/18/72	3	255	BATTELLE			%	
601	299-W23-4	NEUTRON	2/22/73	5	257	BATTELLE			@	
602										
603	299-W23-11	TEMP.	3/3/70	189	216					
604	299-W23-11	NAT. GAMMA	5/17/72	4	228	BATTELLE			#	
605	299-W23-11	DENSITY	6/23/72	5	226	BATTELLE			!	
606	299-W23-11	NEUTRON	2/17/73	5	228	BATTELLE			@	
607										
608	299-W23-13	NAT. GAMMA	11/4/86	2.1	143	BATTELLE	PEARSON	CG 27A97	WHC	
609	299-W23-13	NAT. GAMMA	11/29/86	30	215.9	BATTELLE	PEARSON	CG 27A97	WHC	
610										
611	299-W23-14	NAT. GAMMA	1/15/91	4	164	BATTELLE	PEARSON	CG 27A97	WHC	
612	299-W23-14	NAT. GAMMA	1/21/91	130	223	BATTELLE	PEARSON	CG 27A97	WHC	
613										
614	299-W23-63	NOT LOGGED								
615										
616	299-W23-71	NOT LOGGED								
617										
618	299-W23-210	NOT LOGGED								
619										
620	299-W23-228	NOT LOGGED								
621										
622										
623	NOTES:									
624										
625	!	Density Logs		PNL	Big Notebook					
626		200 West Area		Room 2521						
627		299 w6-2 to 299 W26-5								
628										
629										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
630	@	Neutron Logs		PNL	Big Notebook					
631		200 West Area		Room 2521						
632		299-W6-2 to								
633		299-W26-5								
634										
635	#	Gamma Logs		WHC	Big Notebook					
636		200 West Area		Borrowed by A. Pearson for this compilation						
637		299-W6-2 to								
638		299 W25-51								
639										
640	# #	Same as above								
641		Except composed of loose sheets screwed together								
642										
643										
644	# # #	Same as above								
645		Loose sheets in plastic envelopes								
646										
647	$	Neutron Logs		PNL	Small Notebook					
648		200 Area		Room 2606						
649		299 E13-1 to		Bottom drawer of file cabinet						
650		299-W26-3								
651										
652	%	Density		PNL	Big Notebook					
653		(w/out source)		Room 2521						
654		200 West Area								
655		299-W10-1 to								
656		299-W23-4								
657										
658	&	Gamma Logs (Old)		PNL	Medium Notebook					
659		200 West Area		Room 2521						
660		299-W6-1 to								
661		299-32-77								
662										
663	*	Gamma--Scintillation		PNL	Small Notebook					
664		200-West		Room 2521						
665		299-W6-1 to 299-w26-3								
666										

U-PLANT AGGREGATE AREA

	A	B	C	D	E	F	G	H	I	J
667	^	Caliper Logs		PNL	Big Notebook					
668		200 East & West Areas		Room 2521						
669		299-W18-24 to								
670		299-E26-8								
671										
672	•	Temperature Logs		PNL						
673		200 West Area		Room 2606						
674		299-W11-26		Bottom drawer of file cabinet						
675		to 299-W19-10								
676										
677	~	Temperature-Logs		PNL	Small Notebook					
678		200 E & W		Room 2606						
679		299-W6-1 to 299-E33-18		Bottom drawer of file cabinet						
680										
681	+	Temperature Data from		PNL	Medium Notebook					
682		selected Monitoring Wells		Room 2606						
683				Bottom drawer of file cabinet						
684										
685	<	Filed Logs		PNL						
686				Room 2606						
687				Top drawer of file cabinet						

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 Overbize	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'-TD 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

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			Depth in Feet	Geologic/Hydrologic Data		
Diamond Core	Drill Bit			Sample Method	Geologist Core log	
Description	Construction Diagram				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)

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)

9413204.0159

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)

WELL COMPLETION SUMMARY

Project
Location
Drilling Co.
Driller L. Pultena
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 3/12/80
Date Completed 4/25/80
Static Water Level/Date 122' 4/15/80

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	2"			137' - 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	137' - 140'		
cement grout (internal) 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: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description (Data from sieving)
temporary 10" carbon steel			5			Sand
cement grout 0'-20'			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 @ 52'
			55			No sample
			60			Muddy sand
			65			Sand @ 67'
			70			Muddy sand
			75			Slightly muddy sand @ 77'
			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			Slightly 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 (basalt @ 142)
Pressure grouted 137'-140'			150			Basalt
			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)

9413204.0162

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 — Geologic/Hydrologic Data

Drill Bit — Sample Method — Data from siting

Description	Construction Diagram	Depth in Feet	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 perforated 170'-243'		205		Gravelly sandy mud
		210		No sample
		215		No data
		220		Sl muddy gravelly sand
		225		" " " " " "
		230		" " " "
		235		Slightly gravelly sand
		240		Muddy sandy gravel
cement grout plug 240'-248'	TD = 248'	245		Gravelly 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)

WELL COMPLETION SUMMARY

Project CT-1809, JAJ1349
Location 216-Z-12
Drilling Co.
Driller John G. & L. Bultema
Other (companies)
Geologist(s)

Well No. 299-W18-18 Temp. Well No.
Coordinates N 33903 W 76270
Elevation: Casing Brass Marker

DRILLING METHOD

Drilling Method(s) Cable Tool Rig
Hard Tool 0'-215'
Drilling Fluid
Other

COMPLETION DATA

Drilled Depth 265'
Completed Depth 204'
Date Started 8/3/81
Date Completed 9/11/81
Static Water Level/Date 205 / 8/28/81
188 / 2/14/84

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
Perforations 2 cuts/ft	8"	10'	—	215' - 225'
Perforations 4 cuts/round/ft	8"	25'		185' - 210'
~~Telescoping stainless steel screen~~	~~8"~~	~~60'10"~~	~~10~~	~~183' 224'~~

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 cuft
Cement Grout	262' - 265'	2 sacks	15 cuft
Backfill (Sand)	264' - 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.

9413204.0164

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: Colin 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 Log
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
20' of 12" Carbon Steel Casing (0'-20') temporary			0			
Cement Grout Surface Seal (0'-20')			5			Sand & Gravel
265' of 8" Carbon Steel Casing (0'-265')			10			" "
			15			" "
			20			Loose Gravel (@ 17')
			25			" "
			30			" "
			35			" "
			40			" "
			45			" " (Green)
			50			Sand (45'-48') Gravel (48'-50') (Tan-Brown)
			55			" " "
			60			Boulders & Gravel
			65			" "
			70			" "
			75			Sand (73')
			80			
			85			
			90			
			95			
			100			"
			105			"
			110			"
			115			"
			120			
			125			
			130			"
			135			"
			140			Clay (Brown)
			145			" (White)
			150			Rinald (@ 46')
			155			"
			160			"
			165			Sand (heaving @ 163')

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-W19-18 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: Description	Construction Diagram	Depth in Feet	Geologic/Hydrologic Data: Lithologic Diagram	Lithologic Description
210.5' of 8" Carbon Steel Casing (0'-210.5')		165		
		170		Sand & Gravel (heaving)
		175		Ringold
		180		"
		185		"
80'10" Telescoping Stainless Steel 10 slot Screen (123'-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 (1/2" minus)
Backfill (sand) (204'-262')		230		Sand (fine grained)
		235		" "
		240		" "
		245		" "
4.5" x 15' Dart Bailer (lost in well) (5'-5'-260')		250		"
		255		"
		260		Cobbles & Gravel
Cement Grout (262'-210.5')		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)

WELL COMPLETION SUMMARY

Project CC0230 JAJ 1430-1
Location Backfilled 216-Z-1 Ditch
Drilling Co. Hatch
Driller Gerry Bulteau
Other (companies)
Geologist(s)

Well No. 299-W18-19 Temp. Well No.
Coordinates N 38503 W 76403
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 6/25/92
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' - 178'
Carbon Steel	6"		0' - 250'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement grout	0' - 20'		28 Gals
Cement grout	0' - 178'		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 CC0330, 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	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description
20' of 10" Carbon Steel Casing			0			
(Removed, 0'-20')			5			Top Soil + some sand (black)
Cement Grout (0'-20')			10			" " " " " " gravel
			15			Sand (black) silt + gravel
			20			Sand (black) + gravel
			25			Sand + gravel
178' of 8" Carbon Steel Casing			30			" "
(0'-178')			35			" "
Cement Grout (0'-178')			40			" "
			45			Sand (black) + silt
250' of 6" Carbon Steel Casing			50			" (tan) " "
(0'-250')			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 Ringold)
			150			Lg Cobbles " "
			155			" " " "
			160			Ringold (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 Back filled 216-Z-1 Ditch Project CC0730, JAS 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	Construction Diagram	Drill Bit	Depth in Feet	Geologic/Hydrologic Data: Sample Method	Lithologic Diagram	Lithologic Description (Data from Drillers Log)
			165			
178' of 8" Carbon Steel Casing (0'-178')			170			Cobbles (cemented in Ringold)
			175			Ringold (tight)
Cement Grout (0'-178')			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 (brown)
			225			Ringold (unconsolidated)
Perforations Heats/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
___ 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
Perforations			4 cuts/rd/ft	230 - 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	6"		0 - 230'
" "	8"		0 - 172'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Grout	0 - 20'	28 cal	
"	0 - 172'	89 yd³	

PUMP
Type Depth to Inlet Date Set

ACCEPTANCE
Completed Well: Accept Conditionally Accept
Reject

COMMENTS
Excited annulus between 6" and 8" casing. Excited 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 6/28/82

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Geologic/Hydrologic Data: Sample Method	Lithologic Diagram	Lithologic Description (Drillers Logs)
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 6" casing			30			" "
			35			" "
2" Carbon steel casing			40			" "
			45			Black sand & silt
6" [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
			80			" " "
			85			More black sand
			90			Black sand
			95			Black sand + [illegible]
			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 Ringold
			150			Ringold w/ large cobbles
			155			" " "
			160			Ringold - 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)

9413204.0171

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: Sample Method	Lithologic Diagram	Lithologic Description
8" carbon steel casing			170			Cobbles cemented in Rinsold
(0 - 178')			175			" "
			180			Cobbles + gravel
Inverse Grout			185			" "
			190			Cobble sand
			195			" "
			200			Cemented gravel
			205			Heaving Sand
			210			" "
			215			Some silt w/ heaving sand
			220			Consol. silt + some gravel
			225			Unconsolidated Rinsold
Perforations 4 cuts/round			230			Sand + Gravel (cemented in spots)
1 round /ft, 225'-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)

9413204.0172

WELL COMPLETION SUMMARY

Project
Location
Drilling Co. Dillman
Driller J. Millstead
Other (companies)
Geologist(s)

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

DRILLING METHOD
Drilling Method(s) Cable tool
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	8"	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	8"		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			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method	Auger drilling line	
Description	Construction Diagram	▼		▼	Lithologic Diagram	Lithologic Description
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 brown gravel
			20	•		" " " " "
			25	•		Silt + 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 + brown)
			70	•		" " " "
			75	•		More gravel sand + silt
			80	•		Cemented gravel and silt
			85	•		Cemented gravel
			90	•		Cemented cobbles and silt
			95	•		Silt + some small gravel
			100	•		" " " "
			105	•		" " " "
			110	•		Silt and sand + some small gravel
			115	•		" " " " "
			120	•		" " " " "
			125	•		Silt and sand
			130	•		Silt and fine sand
			135	•		Cemented gravel + fine sand
			140	•		Starting into water Ringold
			145	•		Ringold gravel
			150	•		" " "
			155	•		Ringold silt
			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)

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: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description
			170			Hard Rinsold + boulders
			175			" " "
			180			" " "
			185			" " "
			190			Rinsold + large cobbles
			195			" " "
			200			Rinsold composited cobbles + gravel
			205			" " " "
			210			Rinsold and cobbles
			215			" " "
8" carbon steel 0'-250',			220			Hard Rinsold
perforated 220'-240'			225			Rinsold sand and small gravel
			230			" " " " "
			235			Rinsold sand in [illegible]
			240			" " " "
			245			" " " "
			250			Rinsold [illegible] 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)

9413204.0179

WELL COMPLETION SUMMARY

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

Well No. 299-W19-1 Temp. Well No.
Coordinates PN37613, PW75491, (from Hanford Wells)
Elevation: Casing 673.77' 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 4/15/57
Date Completed 5/2/57
Static Water Level/Date 200'/4/25/57

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				178' - 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: (a) 176-196' and (b) 223-248'. Both of these tubes were later removed. No information is available on how the well was completed. B/bottom in Hanford Wells is 202'

Reviewed by JST Date 12/21/6 Depths are below land surface unless noted.

9413204.0176

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			Depth in Feet	Geologic/Hydrologic Data		
	Drill Bit			Sample Method		Data from Driller's Logs
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
301.8' of 8" 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 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 ● Hard Tool ⊖ Split-Barrel

9413204.0177

AS-BUILT DIAGRAM

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

Location Camden Ave & 16th St 200W Project

Logged by Driller: Raul-Richards

Reviewed by Date

Date Well Started 4/15/52

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 " " Caves
		205			" " " " " "
Recording to Hanford Wells		210			Sand-gravel
C/Bottom = 303'		215			Sand-gravel-v. little silt
		220			" " " " " Caves
2 - 1 1/2" diameter tubes		225			Sand-gravel-some silt "
were installed in 1963 and 1965.		230			Gravel-sand " " "
The screen intervals for these tubes		235			" " silt "
were: (a) 196-198' and (b) [illegible]		240			Boulders-gravel-sand-silt
Some of these tubes were [illegible]		245			Sand-gravel-silt
[illegible] No completion [illegible]		250			" " "
is available after the tube [illegible]		255			" " "
		260			Sand-gravel-lots of silt-Caves
		265			" " " " " "
		270			" " " " " "
		275			Muck (heaving)
		280			" "
		285			F Sand-gravel "
		290			" " " "
		295			" " " "
		300			Gravel-sand-some silt
Bottom of 5" 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 ● Hand 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 37819, PW 74095 (From Hanford Grid)
Elevation: Casing 695.12' Brass Marker

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

COMPLETION DATA
Drilled Depth 301'
Completed Depth 301'
Date Started 9/9/57 Modified 3/6/85
Date Completed 9/20/57 4/9/85
Static Water Level/Date 252'/9/20/57

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

H2O Level/Date 223'/4/9/85 → Could be a typo on drill logs could be 225' or 223'

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/ 1/4" packer	5"		0' - 213'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement Grout	0' - 201'		618 Gallons
Crushed brite - behind screen (liner)	≈201' - ≈213'		12 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' 4 cuts/round/ft

Reviewed by SET Date 10/2/91 Depths are below land surface unless noted.

9413204.0179

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-3 Sheet 1 of 2

Location 241-U-301 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-cobbles
			125			" " " "
			130			" " " "
			135			Cement Sand
			140			Yellow Clay + gravel cobbles
			145			Sandy Clay
			150			" "
			155			" "
			165			" "

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-W19-3 Sheet 2 of 2
Location 241-U-361 Project

Logged by Driller: Hatch, Darrel Luttke
Reviewed by Date

Date Well Started 9/9/57 (Updated 3/10/55)
Date Well Completed 9/20/57 4/9/55

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 @ 177')
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		" "
Screen (230'-250')		245		" " Clay
		250		"
		255		Loose sand-gravel
		260		" " "
		265		" "
		270		Soft sandy clay
		275		Cemented 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

A-1300-186 (05.90)

WELL COMPLETION SUMMARY

Project
Location
Drilling Co.
Driller ELMER CLARE
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 355'?
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"	169'		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] in place. The tubes were [illegible] but no information is available on how they were removed. Diameter [illegible] to Hanford level is 550'

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

AS-BUILT DIAGRAM

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

Location _____ Project _____

Logged by _____

Reviewed by SJT Date 10/21/91

Date Well Started 12-1-59

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'
SLIP 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		
Description	Construction Diagram	Drill Bit		Sample Method	Lithologic Diagram	Lithologic Description
8" CASING		O	170	O		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 SANDY 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)

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: (T) 515'-535'			375			"
(Q) 456'-481'			380			"
(R) 385'-411'			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 485-505'

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

2-1800-186 (05/90)

9413204.0185

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

A-1800-186 (05/90)

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'
" " NX Casing	4"	4 1/2" 3.5"	0' - 148' 0 - 452'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement	0' - 148'		
"gelled in place"	0' - 452'		
	-		
	-		
	-		
	-		

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/E Bottom = 468'

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' CABLE TOOL
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
		5		Cemented material, Large cobbles, sml gravel, sml boulders
6" casing to 148'		10		"
4" casing to 148',		15		Cobbles, sml boulders, gravel & sand
cemented in place		20		"
		25		"
3.675 NC standard		30		Coarse grey 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 boulder, 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'- cobble layer
		120		117-120'- Sand & silt
		125		Hard packed sand & silt
		130		Coarse sand & silt
		135		"
		140		"
		145		Fine sand, hard silt to 146'
		150		148-159' Silty fine
		155		to very fine sand
		160		[illegible]
		165		

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

RF

A-1800-186 (05/90)

9413204.0188

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 sand, gravel
			175			"
			180			"
			185			"
NC Hole (3 5/8") and			190			"
NX Casing (3 1/2" O.D.)			195			"
0' to 405'			200			"
"called 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			Also [illegible] 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 to medium 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

A-1800-186 (05/90)

9413204.0189

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 3 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
			330		
			335		Medium Sand
			340		Conglomerate
			345		Coarse to medium $CaCO_3$
			350		SiO_2 Conglomerate
			355		Conglomerate
			360		
			365		
			370		
			375		
			380		6" coarse sand
			385		8" coarse sand
			390		
			395		
No HOLE (3 5/8") and			400		
NX Casing (3 1/2 O.D.) to 406'			405		
"celled 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 428' - 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)

AS-BUILT DIAGRAM

Boring or Well Number 299-W19-10 Sheet 4 of 4
Location Project AR4-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 ~~Green conglomerate~~
			510			fair to poor induration
			515			No $CaCO_3$ 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)

9413204.0191

WELL COMPLETION SUMMARY

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

Well No. 299-W19-4 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
"	"			43 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'	216 bags	206 gal

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

ACCEPTANCE
Completed Well: Accept Conditionally Accept
Reject

COMMENTS
Annulus between 6" & 8" casing filled with grout.
Well curbing - 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 gravels & 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		Heaving fine & 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)

9413204.0193

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	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			11.5	●		
			170	●		"
			175	●		cemented gravel w/sand
			180	●		"
			185	●		"
			190	●		" to 188'
			195	●		Large cemented cobbles, gravel, cemented gravel, blk sand, silt
			200	●		"
			205	●		"
			210	●		"
5"-diameter, 20 slot, 137" length screen from 237'5" to 250' → packer at top of screen			215	●		"
			220	●		cemented gravel, cobbles, blk sand, silt
			225	●		cemented gravel, cobbles
			230	●		"
			235	●		cemented sands + gravels
			240	●		" with some fine sa
			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)

9413204.0194

WELL COMPLETION SUMMARY

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

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'
Drilling Fluid 106'-285'
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

SCREEN

MORE ON BACK

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'
" "	6"		225' - 285'

PERMANENT CASING

MORE ON BACK

Type	Nominal Diameter	Max. Outer Diameter	Interval
Carbon steel	8"		0 - 200'
" "	6"		0 - 225'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Cement grout	0' - 200'	75½ gal	

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

5" casing perforated 15'-90', 190'-195'
Screen assembly is alternating blanks and screens from 215'-285'

Reviewed by Date Depths are below land surface unless noted.

9413204.0195

AS-BUILT DIAGRAM

Boring or Well Number: 299-W19-16 Sheet 1 of 2
Location: 216-U1 + 2 Cribs Project:

Logged by:
Reviewed by: Date:
Date Well Started: 4/5/85
Date Well Completed: 6/12/85

Well Construction Data — Drill Bit

Description	Construction Diagram	Depth in Feet	Sample Method	Lithologic Diagram	Lithologic Description (Geologic/Hydrologic Data; Data from Sisyca)
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
6" 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 " "
gearhart rotor @ 0.97'		100			Slightly muddy sand
		105			" " " " "
		110			" " "
16" 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)

9413204.0196

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 6/11/85

Well Construction Data		Depth in Feet	Geologic/Hydrologic Data	
Description	Construction Diagram (Drill Bit)		Lithologic Diagram (Sample Method: Data from source)	Lithologic Description
		170		Slightly gravelly sand
8" carbon steel, 0'-200'		175		Gravelly sand
perforated 170'-197'		180		Sl. gravelly sand
		185		" " " "
cement grout 0'-200'		190		" " "
		195		" " "
		200		Muddy sand
		205		No samples
6" carbon steel 0'-225'		210		Gravelly muddy sand
		215		Sl. muddy gravelly sand
5" drive shoe w/ packer 215'-225'		[illegible]		Sl. muddy sand
		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'-250'		255		Gravelly sand "
		260		" "
		265		" "
		270		Sandy gravel
5" 20 slot screen 250'-255'		275		Sl. muddy gravelly sand
		280		Sl. gravelly sl. muddy sand
5" blank casing 255'-255'		285		Slightly muddy 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)

9413204.0197

WELL COMPLETION SUMMARY REPORT

Project
Location 216-U-17 Crib
Drilling Co. Associated Drilling
Driller L. Gordon
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 4-1-1986
Date Completed 6-11-1986
Static Water Level/Date 226'8" [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	1."		0 - 220'

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
Grout	200 - 0	640 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 - 120') removed			30			Sand
			35			"
			40			Gravelly Sand
			45			Sand
Galvanized 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 Coarse data

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)

9413204.0199

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 4/1/86

Date Well Completed 6/11/86

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
(0-180'), 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)

9413204.0200

WELL COMPLETION SUMMARY

Project
Location 216-U-17
Drilling Co. Omnisco
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.

9413204.0201

AS-BUILT DIAGRAM

Boring or Well Number: ~~699-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	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: 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 (cinder)
Cement Grout 0 - 20'			20			Sl. Muddy Sand (cinder)
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)

9413204.0202

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: Description	Depth in Feet	Geologic/Hydrologic Data: 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)

9413204.0203

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 Bowl: 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	___ 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			6 slots/ft	200 - 300

TEMPORARY CASING

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

PERMANENT CASING

Type	Nominal Diameter	Max. Outer Diameter	Interval
			-
Carbon steel casing	24"		0 - 232

ANNULAR SEAL/FILL

Type	Interval	Quantity	Volume
	-		
	-		
	-		
	-		
	-		
	-		

PUMP

Type Depth to Inlet Date Set

ACCEPTANCE

Completed Well: Accept Conditionally Accept
Reject

COMMENTS

Data data also available

Reviewed by Date Depths are below land surface unless noted.

SST

AS-BUILT DIAGRAM

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

Location _____ Project _____

Logged by _____

Reviewed by _____ Date _____

Date Well Started 7/28/60

Date Well Completed 8/10/60

Sample Method: Geol. from Sieve Data

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description
			5	•		Sl. Muddy Sand
			10	•		" " "
			15	•		Muddy Sand
			20	•		" "
7" dia. Carbon Steel Casing			25	•		Sl. Gravelly Sl. Muddy Sand
(0-302')			30	•		Cl. Muddy Sand
			35	o		Sand
			40	o		"
			45	•		Sl. Muddy Sand
			50	•		Sl. Gravelly Sl. Muddy Sand
			55	o		Sl. Gravelly Sand
			60	o		Gravelly Sand
			65	o		Sand
			70	o		Sand
			75	o		Gravel
			80	o		Sand
			85	o		"
			90	o		Muddy Sand
			95	o		Sl. Muddy Sand
			100	o		Muddy Sand
			105	o		Sand
			110	o		Muddy Sand
			115	o		Sl. Muddy Sand
			120	o		" " "
			125	o		" " "
			130	o		" " "
			135	o		Muddy Sand
			140	o		" "
			145	o		Sl. Muddy Sand
			150	o		" " "
			155	o		Sand
			160	o		Muddy Sand
			165	o		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)

9413204.0205

AS-BUILT DIAGRAM

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

Location Project

Logged by

Reviewed by Date

Date Well Started 7/28/60

Date Well Completed 8/10/60

Well Construction Data: Description	Construction Diagram	Drill Bit	Depth in Feet	Sample Method	Lithologic Diagram	Geologic/Hydrologic Data: Lithologic Description (Geol. from Sieve Data)
			170	o		Sandy Mud
			175	o		Muddy Sand
2-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	•		" "
(Screen [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)

9413204.0206

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 ~~10/1/83~~ 195' (Hanford Wells)

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" ~~5 3/4~~	30'		0 - 30'

* 1983 Maintanance 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.

9413204.0207

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

Well Construction Data: Description	Construction Diagram	Depth in Feet	Geologic/Hydrologic Data: 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 gravel, Sand
		45		slightly muddy Sand
		50		Sand
		55		Slightly muddy Sand
		60		mudd, Sand
Perforations, 50-95'		65		Slightly muddy Sand
		70		"
		75		"
		80		"
		85		"
		90		mudd, sandy Gravel
		95		muddy sand
		100		sandy Gravel
		105		"
		110		sandy Mud
		115		muddy Sand CaCO3
		120		muddy Sand CaCO3
		125		gravelly muddy Sand, 2"
		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

KMF

A-1800-186 (05/90)

9413204.0208

AS-BUILT DIAGRAM

Boring or Well Number 299-W23-11 Sheet 2 of 2
Location _____ Project _____

Logged by _____
Reviewed by _____ Date _____

Date Well Started 10-10-72
Date Well Completed 11-8-72

Well Construction Data			Depth in Feet	Geologic/Hydrologic Data		
		Drill Bit		Sample Method		
Description	Construction Diagram				Lithologic Diagram	Lithologic Description
			165			
			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)

DISTRIBUTION SHEET

To: Distribution

From: Environmental Engineering Group

Date: January 22, 1992

Project Title/Work Order:

U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study WHC-SD-EN-DP-019, Rev. 1

EDT No.:

ECN No.: 164710

Name	MSIN	With Attachment	EDT/ECN & Comment	EDT/ECN Only
K. R. Barton	K6-96	X		
J. R. Brodeur	G6-50	X		
R. W. Bryce	K6-96	X		
R. A. Carlson	H4-55	X		
M. A. Chamness	K6-96	X		
J. W. Fassett	G6-50	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		
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R. K. Price	G6-05	X		
G. D. Spice	H4-56	X		
S. S. Teel	K6-96	X		
S. J. Trent (5)	H4-56	X		
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Central Files	L4-08	X		
EDMC (2)	H4-22	X		
IRM Clearance	H4-17	X		

9413204.0210

ECN 164710

INFORMATION RELEASE REQUEST

References: WHC-CM-3-4

COMPLETE FOR ALL TYPES OF RELEASE

Purpose

- [ ] Speech or Presentation
  - [ ] Full Paper
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- [X] Other Data Pkg.

New ID Number: N/A

Existing ID Number (include revision, volume, etc.): WHC-SD-EN-DP-019, Rev. 1

If previously cleared, list ID number: WHC-SD-EN-DP-019, Rev. 0

Date Release Required: January 31, 1992

Title: U Plant Geologic and Geophysics Data Package for the 200 Aggregate Area Management Study

Unclassified Category: UC-N/A

Impact Level: 4

COMPLETE FOR SPEECH OR PRESENTATION

Title of Journal: N/A

Group or Society Sponsoring: N/A

Date(s) of Conference or Meeting: N/A

City/State: N/A

Will proceedings be published? [ ] Yes [ ] No

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

Title of Conference or Meeting: N/A

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Other Program	[ ]	[ ]			
References Available to Intended Audience	[X]	[ ]	S. J. Trent	SJ Trent	1/24/92
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): S. J. Trent — Date: 1/24/92

Responsible Manager (Printed/Signature): R. A. Carlson — Date: 1/27/92

Intended Audience: [ ] Internal [ ] Sponsor [X] External

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

APPROVED FOR RELEASE — OFFICIAL DOCUMENT — Date 2/3/92

INFORMATION

Date Received: 1/28/92

9413204.0211

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Information Release Request

Part 1