

IPEC Ground Water Monitoring Well Information Table

Well	Sample Depth	Well Depth	Date Complete	Type of Well at Completion	Current Sample Frequency	Rationale
<b>Unit 1 Investigation Wells</b>						
MW-36-26	21	54	2/1/06	Nested Wells	Monthly	Assess migration pathways from IP2-FSP; Assess soil backfill as a preferential pathway; Assess hydrogeology of bedrock immediately below the IP-2 Discharge Canal (natural and blasting induced fractures); Assess upward gradients in bedrock; Compare tidal t
36-41	36					
36-53	51					
MW-37-22	11	57	2/22/06	Nested Wells	Monthly	Assess hydrogeology of bedrock immediately west of the IP2 Discharge Canal; Assess hydraulic communication of bedrock with Discharge Canal (with concrete bottom) and river; Compare tidal temporal shift to MW-36; Assess migration pathways.
37-32	30					
37-40	38					
37-57	55					
MW-42-51	41	80	3/22/06	Nested Wells	Monthly	Assess potential release from IP2-RWST and Tank Pit
42-79	74					
MW-47-56	46	80	3/14/06	Nested Wells	Monthly	Verify no western migration from IP1-FSB past curtain drains
47-80	75					
MW-49-25	20	65	3/20/06	Nested Wells	Monthly	Similar to MW-37 but for IP1 Discharge Canal (with no concrete bottom).
49-42	37					
49-65	63					
MW-50-42	32	67	3/13/06	Nested Wells	Monthly	Similar to MW-36 but for IP1 Discharge Canal (with no concrete bottom).
50-67	64					
MW-53-82	72	125	8/4/06	Nested Wells	Monthly	Evaluate Sr releases from IP-1 FSB and used for tracer test (30 feet north of NSB wall)
53-120	110					
MW-54	NA	206	NA	Waterloo Multilevel	Monthly	In Superheater Building to assess Sr release from IP-1
MW-55-24	19	78	9/21/06	Nested Wells	Monthly	Evaluate Sr releases from IP-1 and for tracer test, assess vertical extent of Sr
55-35	33					
55-54	49					
MW-56	NA	89	NA	Nested Wells	Monthly	Evaluate releases from IP1-FSB and IP1-Spray Containment Sump and assess effectiveness of curtain drains
MW-57-11	9	47	8/31/06	Nested Wells	Monthly	Assess Sr releases from IP-1
MW-57-20	17					
MW-57-45	38					
MW-58-26	21	70	9/26/06	Nested Wells	Monthly	Delineate Southward Extent of Strontium and releases from IP-1
58-65	58					
MW-59-31	26	70		Nested Wells	Monthly	Delineate the Westward Migration of Sr and Tritium and Assess Hydrogeologic Influences of Canal
59-45	39					
59-68	64					
MW-61		200	NA	Waterloo Multilevel	Monthly	Assess westward migration of Sr and Tritium; Assess vertical extent of Sr.
MW-62		200	NA	Waterloo Multilevel	Monthly	To assess how inlet pipe trench and potential permeable fill affects groundwater flow and causes migration to the south
MW-63		200	NA	Waterloo Multilevel	Monthly	Delineate the westward extent of Sr
MW-65		80	NA	Nested Wells	Monthly	East of IP-1 FSB to provide delineation of Sr and hydrogeology of Site
MW-111	19	19	2/24/00	Single Screened Well	Monthly	Investigate groundwater quality associated with sheen observed at diesel generator building

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<b>Unit 2 Investigation Wells</b>						
MW-30	75', 80'	89	8/4/06	Waterloo Multilevel	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-31	53', 67', 89'	90	9/21/06	Waterloo Multilevel	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-32	62', 92', 140', 160', 197'	200	9/22/06	Waterloo Multilevel	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-33	12.0	30	12/12/05	Open Borehole	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-34	12.0	30	12/8/05	Open Borehole	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-35	12.0	30	12/6/05	Open Borehole	Monthly	IP2-FSP leak detection monitoring; Assess bedrock hydrogeology- flow direction; Tracer test injection.
MW-36-26 36-41 36-53	21 36 51	54	2/1/06	Nested Wells	Monthly	Assess migration pathways from IP2-FSP; Assess soil backfill as a preferential pathway; Assess hydrogeology of bedrock immediately below the IP-2 Discharge Canal (natural and blasting induced fractures); Assess upward gradients in bedrock; Compare tidal t
MW-37-22 37-32 37-40 37-57	11 30 38 55	57	2/22/06	Nested Wells	Monthly	Assess hydrogeology of bedrock immediately west of the IP2 Discharge Canal; Assess hydraulic communication of bedrock with Discharge Canal (with concrete bottom) and river; Compare tidal temporal shift to MW-36; Assess migration pathways.
MW-49-25 49-42 49-65	20 37 63	65	3/20/06	Nested Wells	Monthly	Similar to MW-37 but for IP1 Discharge Canal (with no concrete bottom).
MW-50-42 50-67	32 64	67	3/13/06	Nested Wells	Monthly	Similar to MW-36 but for IP1 Discharge Canal (with no concrete bottom).
MW-52 MW-52-12	NA 10	200	NA	Waterloo Multilevel	Semi-annual	Assess potential preferential pathway along utility conduit.
MW-55-24 55-35 55-54	19 33 49	78	9/21/06	Nested Wells	Monthly	Evaluate Sr releases from IP-1 and for tracer test, assess vertical extent of Sr
MW-60		45	NA	Waterloo Multilevel	Monthly	Delienate northward and westward extent of Tritium and Sr
MW-61		200	NA	Waterloo Multilevel	Monthly	Assess westward migration of Sr and Tritium; Assess vertical extent of Sr.
MW-62		200	NA	Waterloo Multilevel	Monthly	To assess how inlet pipe trench and potential permeable fill affects groundwater flow and causes migration to the south
MW-111	19	19	2/24/00	Single Screened Well	Monthly	Investigate groundwater quality associated with sheen observed at diesel generator building

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Well	Sample Depth	Well Depth	Date Complete	Type of Well at Completion	Current Sample Frequency	Rationale
<b>Unit 1 Drain Line Investigation Wells</b>						
MW-39	NA	200	NA	Waterloo Multilevel	Monthly	Verify hydraulic effectiveness of curtain drains beneath IP1 to capture IP1-SFP release; Verify upward gradients in bedrock
MW-41-15	10	64	2/23/06	Nested Wells	Monthly	Further verify hydraulic effectiveness of curtain drains beneath IP1 to capture IP1-SFP release and assess potential release from IP3-RWST.
41-42	32					
41-64	62					
MW-43-28	18	62	3/15/06	Nested Wells	Monthly	Assess potential release from IP3-Tank Pit
43-62	52					
MW-44-67	65	105	3/15/06	Nested Wells	Monthly	Assess westerly travel path from potential IP3-RWST release and provide IP3-FSP flow direction and future IP3-FSP leak detection monitoring
44-104	94					
MW-45-43	39	65	3/29/06	Nested Wells	Monthly	Assess potential IP3-PAB Sump release and provide IP3-FSP flow direction and future IP3-FSP leak detection monitoring
45-62	59					
MW-46	20.0	30	2/22/06	Open Borehole	Monthly	Assess potential IP3-PAB Sump release and provide IP3-FSP flow direction and future IP3-FSP leak detection monitoring
MW-47-56	46	80	3/14/06	Nested Wells		
47-80	75					
MW-56	NA	89	NA	Nested Wells	Monthly	Evaluate releases from IP1-FSB and IP1-Spray Containment Sump and assess effectiveness of curtain drains
<b>On-site Boundary Wells</b>						
MW-40	NA	200	NA	Waterloo Multilevel	Monthly	Verify upward gradients in bedrock; verify no southerly migration though bedrock fractures south of IP3 operations (southern property boundary).
MW-51	NA	200	NA	Waterloo Multilevel	Monthly	Further verify no southerly migration though bedrock fractures south of IP3 operations (southern property boundary).
<b>River Front Boundary Wells</b>						
MW-38	40	40	12/1/2005	Single Screened Well	Monthly	Assess potential southerly migration along Discharge Canal
MW-48-23	18	40	2/2/06	Nested Wells	Monthly	Verify no southerly migration after discharge channel outfall and south of MW-38 (southern property boundary).
48-38	36					
MW-60		45	NA	Waterloo Multilevel	Monthly	Delienate northward and westward extent of Tritium and Sr
MW-61		200	NA	Waterloo Multilevel	Monthly	Assess westward migration of Sr and Tritium; Assess vertical extent of Sr.
MW-62		200	NA	Waterloo Multilevel	Monthly	To assess how inlet pipe trench and potential permeable fill affects groundwater flow and causes migration to the south
MW-63		200	NA	Waterloo Multilevel	Monthly	Delineate the westward extent of Sr

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Well	Sample Depth	Well Depth	Date Complete	Type of Well at Completion	Current Sample Frequency	Rationale
<b>Miscellaneous Wells</b>						
T1-U1-1		30	6/16/06	Single Screened Well	N/A	Inject Tracer between Curtain Drain and IP1-FSB to asses ability of curtain drain to contain releases from IP1-FSB
T1-U1-2		4	N.A	Single Screened Well	N/A	Tracer Test Injection Well to assess migration paths from IP1-FSB towards the River
MW-101	15	15	2/7/00	Single Screened Well	Annual	Groundwater quality associated with chemical waste storage area
MW-103	26	26	2/9/00	Single Screened Well	Annual	Groundwater quality associated with chemical waste storage area
MW-104	30	30	2/10/00	Single Screened Well	Annual	Former septic tank and UST release at Maintenance Training Facility
MW-105	20	20	2/10/00	Single Screened Well	Annual	Former septic tank and UST release at Maintenance Training Facility
MW-107	35	35	2/15/00	Single Screened Well	Annual	NEM Laboratory Septic Tank
MW-110	30	30	2/25/00	Single Screened Well	Annual	Investigate groundwater quality associated with Tank 11 fuel oil release
MW-112	24	24	2/26/00	Single Screened Well	Annual	Investigate groundwater quality associated with Tank 11 fuel oil release and stains at tank 12
U3-1	19	19	4/11/96	Single Screened Well	Semi-annual	Investigate Tritium along discharge canal
U3-2	15	15	NA	Single Screened Well	Semi-annual	Investigate Tritium along discharge canal
U3-3	15	15	4/9/96	Single Screened Well	Semi-annual	Investigate Tritium along discharge canal
U3-4D	34	34	12/15/97	Single Screened Well	Semi-annual	investigate oil beneath IP3-TB
U3-4S	18	18	12/12/97	Single Screened Well	Semi-annual	investigate oil beneath IP3-TB
U3-T1		2	12/12/97	Core Hole	Monthly	investigate oil beneath IP3-TB
U3-T2		1	12/12/97	Core Hole	Monthly	investigate oil beneath IP3-TB
I2	39	40	4/8/03	Single Screened Well	Annual	Geotechnical Well