

Appendix P – Groundwater Impact Assessment

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P.1 – Leachate Data

Well Name	Parameter Name	Sample Date	Units	Result	Qualifier	SQL
L302	1,1,1,2-Tetrachloroethane	05/17/10	ug/L	30	U	30
L302	1,1,1,2-Tetrachloroethane	05/25/11	ug/L	20	U	20
L302	1,1,1,2-Tetrachloroethane	04/17/12	ug/L	20	U	20
L302	1,1,1,2-Tetrachloroethane	05/31/13	ug/L	20	U	20
L302	1,1,1,2-Tetrachloroethane	05/21/14	ug/L	20	U	20
L302	1,1,1,2-Tetrachloroethane	05/27/15	ug/L	50	U	50
L302	1,1,1,2-Tetrachloroethane	05/03/16	ug/L	50	U	50
L309	1,1,1,2-Tetrachloroethane	04/26/17	ug/L	50	U	50
L302	1,1,1,2-Tetrachloroethane	11/08/17	ug/L	50	U	50
L309	1,1,1,2-Tetrachloroethane	10/29/18	ug/L	50	U	50
L302	1,1,1,2-Tetrachloroethane	04/23/19	ug/L	20	U	20
L302	1,1,1-Trichloroethane	05/17/10	ug/L	50	U	50
L302	1,1,1-Trichloroethane	05/25/11	ug/L	20	U	20
L302	1,1,1-Trichloroethane	04/17/12	ug/L	20	U	20
L302	1,1,1-Trichloroethane	05/31/13	ug/L	20	U	20
L302	1,1,1-Trichloroethane	05/21/14	ug/L	20	U	20
L302	1,1,1-Trichloroethane	05/27/15	ug/L	50	U	50
L302	1,1,1-Trichloroethane	05/03/16	ug/L	50	U	50
L309	1,1,1-Trichloroethane	04/26/17	ug/L	50	U	50
L302	1,1,1-Trichloroethane	11/08/17	ug/L	50	U	50
L302	1,1,1-Trichloroethane	04/18/18	ug/L	20	U	20
L309	1,1,1-Trichloroethane	10/29/18	ug/L	50	U	50
L302	1,1,1-Trichloroethane	04/23/19	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	05/17/10	ug/L	40	U	40
L302	1,1,2,2-Tetrachloroethane	05/25/11	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	04/17/12	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	05/31/13	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	05/21/14	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	05/27/15	ug/L	100	U	100
L302	1,1,2,2-Tetrachloroethane	05/03/16	ug/L	100	U	100
L309	1,1,2,2-Tetrachloroethane	04/26/17	ug/L	100	U	100
L302	1,1,2,2-Tetrachloroethane	11/08/17	ug/L	100	U	100
L302	1,1,2,2-Tetrachloroethane	04/18/18	ug/L	20	U	20
L309	1,1,2,2-Tetrachloroethane	10/29/18	ug/L	100	U	100
L302	1,1,2,2-Tetrachloroethane	04/23/19	ug/L	20	U	20
L302	1,1,2-Trichloroethane	05/17/10	ug/L	40	U	40
L302	1,1,2-Trichloroethane	05/25/11	ug/L	20	U	20
L302	1,1,2-Trichloroethane	04/17/12	ug/L	20	U	20
L302	1,1,2-Trichloroethane	05/31/13	ug/L	20	U	20
L302	1,1,2-Trichloroethane	05/21/14	ug/L	20	U	20
L302	1,1,2-Trichloroethane	05/27/15	ug/L	50	U	50
L302	1,1,2-Trichloroethane	05/03/16	ug/L	50	U	50
L309	1,1,2-Trichloroethane	04/26/17	ug/L	50	U	50
L302	1,1,2-Trichloroethane	11/08/17	ug/L	50	U	50
L302	1,1,2-Trichloroethane	04/18/18	ug/L	20	U	20
L309	1,1,2-Trichloroethane	10/29/18	ug/L	50	U	50
L302	1,1,2-Trichloroethane	04/23/19	ug/L	50	U	50
L302	1,1-Dichloroethane	05/17/10	ug/L	40	U	40
L302	1,1-Dichloroethane	05/25/11	ug/L	20	U	20
L302	1,1-Dichloroethane	04/17/12	ug/L	20	U	20

L302	1,1-Dichloroethane	05/31/13	ug/L	20	U	20
L302	1,1-Dichloroethane	05/21/14	ug/L	20	U	20
L302	1,1-Dichloroethane	05/27/15	ug/L	50	U	50
L302	1,1-Dichloroethane	05/03/16	ug/L	50	U	50
L309	1,1-Dichloroethane	04/26/17	ug/L	50	U	50
L302	1,1-Dichloroethane	11/08/17	ug/L	50	U	50
L302	1,1-Dichloroethane	04/18/18	ug/L	20	U	20
L309	1,1-Dichloroethane	10/29/18	ug/L	50	U	50
L302	1,1-Dichloroethane	04/23/19	ug/L	20	U	20
L302	1,1-Dichloroethene	05/17/10	ug/L	40	U	40
L302	1,1-Dichloroethene	05/25/11	ug/L	20	U	20
L302	1,1-Dichloroethene	04/17/12	ug/L	20	U	20
L302	1,1-Dichloroethene	05/31/13	ug/L	20	U	20
L302	1,1-Dichloroethene	05/21/14	ug/L	20	U	20
L302	1,1-Dichloroethene	05/27/15	ug/L	50	U	50
L302	1,1-Dichloroethene	05/03/16	ug/L	50	U	50
L309	1,1-Dichloroethene	04/26/17	ug/L	50	U	50
L302	1,1-Dichloroethene	11/08/17	ug/L	50	U	50
LREP	1,1-Dichloroethene	11/08/17	ug/L	50	U	50
L302	1,1-Dichloroethene	04/18/18	ug/L	20	U	20
L309	1,1-Dichloroethene	10/29/18	ug/L	50	U	50
LREP	1,1-Dichloroethene	10/29/18	ug/L	50	U	50
L302	1,1-Dichloroethene	04/23/19	ug/L	20	U	20
L302	1,1-Dichloropropene	05/17/10	ug/L	80	U	80
L302	1,1-Dichloropropene	05/25/11	ug/L	20	U	20
L302	1,1-Dichloropropene	04/17/12	ug/L	20	U	20
L302	1,1-Dichloropropene	05/31/13	ug/L	20	U	20
L302	1,1-Dichloropropene	05/21/14	ug/L	20	U	20
L302	1,1-Dichloropropene	05/27/15	ug/L	50	U	50
L302	1,1-Dichloropropene	05/03/16	ug/L	50	U	50
L309	1,1-Dichloropropene	04/26/17	ug/L	50	U	50
L302	1,1-Dichloropropene	11/08/17	ug/L	50	U	50
L309	1,1-Dichloropropene	10/29/18	ug/L	50	U	50
L302	1,1-Dichloropropene	04/23/19	ug/L	20	U	20
L302	1,2,3-Trichlorobenzene	05/17/10	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	05/25/11	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	04/17/12	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	05/31/13	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	05/21/14	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	05/27/15	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	05/03/16	ug/L	50	U	50
L309	1,2,3-Trichlorobenzene	04/26/17	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	11/08/17	ug/L	50	U	50
L309	1,2,3-Trichlorobenzene	10/29/18	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	04/23/19	ug/L	50	U	50
L302	1,2,3-Trichloropropane	05/17/10	ug/L	100	U	100
L302	1,2,3-Trichloropropane	05/25/11	ug/L	50	U	50
L302	1,2,3-Trichloropropane	04/17/12	ug/L	50	U	50
L302	1,2,3-Trichloropropane	05/31/13	ug/L	50	U	50
L302	1,2,3-Trichloropropane	05/21/14	ug/L	50	U	50
L302	1,2,3-Trichloropropane	05/27/15	ug/L	150	U	150

L302	1,2,3-Trichloropropane	05/03/16	ug/L	150	U	150
L309	1,2,3-Trichloropropane	04/26/17	ug/L	150	U	150
L302	1,2,3-Trichloropropane	11/08/17	ug/L	150	U	150
L309	1,2,3-Trichloropropane	10/29/18	ug/L	150	U	150
L302	1,2,3-Trichloropropane	04/23/19	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	05/17/10	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	05/25/11	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	04/17/12	ug/L	160	U	160
L302	1,2,4-Trichlorobenzene	05/31/13	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	05/21/14	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	05/27/15	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	05/03/16	ug/L	50	U	50
L309	1,2,4-Trichlorobenzene	04/26/17	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	11/08/17	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	04/18/18	ug/L	50	U	50
L309	1,2,4-Trichlorobenzene	10/29/18	ug/L	50	U	50
L302	1,2,4-Trichlorobenzene	04/23/19	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/17/10	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/25/11	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	04/17/12	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/31/13	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/21/14	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/27/15	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	05/03/16	ug/L	50	U	50
L309	1,2,4-Trimethylbenzene	04/26/17	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	11/08/17	ug/L	50	U	50
L309	1,2,4-Trimethylbenzene	10/29/18	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	04/23/19	ug/L	50	U	50
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/17/10	ug/L	130	U	130
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/25/11	ug/L	30	U	30
L302	1,2-Dibromo-3-Chloropropane (DBCP)	04/17/12	ug/L	30	U	30
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/31/13	ug/L	50	U	50
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/21/14	ug/L	50	U	50
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/27/15	ug/L	50	U	50
L302	1,2-Dibromo-3-Chloropropane (DBCP)	05/03/16	ug/L	50	U	50
L309	1,2-Dibromo-3-Chloropropane (DBCP)	04/26/17	ug/L	50	U	50
L302	1,2-Dibromo-3-Chloropropane (DBCP)	11/08/17	ug/L	50	U	50
L309	1,2-Dibromo-3-Chloropropane (DBCP)	10/29/18	ug/L	58.8	U	58.8
L302	1,2-Dibromo-3-Chloropropane (DBCP)	04/23/19	ug/L	58.8	U	58.8
L302	1,2-Dichlorobenzene	05/17/10	ug/L	80	U	80
L302	1,2-Dichlorobenzene	05/25/11	ug/L	50	U	50
L302	1,2-Dichlorobenzene	04/17/12	ug/L	50	U	50
L302	1,2-Dichlorobenzene	05/31/13	ug/L	50	U	50
L302	1,2-Dichlorobenzene	05/21/14	ug/L	50	U	50
L302	1,2-Dichlorobenzene	05/27/15	ug/L	100	U	100
L302	1,2-Dichlorobenzene	05/03/16	ug/L	100	U	100
L309	1,2-Dichlorobenzene	04/26/17	ug/L	100	U	100
L302	1,2-Dichlorobenzene	11/08/17	ug/L	100	U	100
L302	1,2-Dichlorobenzene	04/18/18	ug/L	50	U	50
L309	1,2-Dichlorobenzene	10/29/18	ug/L	100	U	100
L302	1,2-Dichlorobenzene	04/23/19	ug/L	50	U	50

L302	1,2-Dichloroethane	05/17/10	ug/L	30	U	30
L302	1,2-Dichloroethane	05/25/11	ug/L	10	U	10
L302	1,2-Dichloroethane	04/17/12	ug/L	10	U	10
L302	1,2-Dichloroethane	05/31/13	ug/L	10	U	10
L302	1,2-Dichloroethane	05/21/14	ug/L	10	U	10
L302	1,2-Dichloroethane	05/27/15	ug/L	50	U	50
L302	1,2-Dichloroethane	05/03/16	ug/L	50	U	50
L309	1,2-Dichloroethane	04/26/17	ug/L	50	U	50
L302	1,2-Dichloroethane	11/08/17	ug/L	50	U	50
LREP	1,2-Dichloroethane	11/08/17	ug/L	50	U	50
L302	1,2-Dichloroethane	04/18/18	ug/L	10	U	10
L309	1,2-Dichloroethane	10/29/18	ug/L	50	U	50
LREP	1,2-Dichloroethane	10/29/18	ug/L	50	U	50
L302	1,2-Dichloroethane	04/23/19	ug/L	10	U	10
L302	1,2-Dichloropropane	05/17/10	ug/L	40	U	40
L302	1,2-Dichloropropane	05/25/11	ug/L	10	U	10
L302	1,2-Dichloropropane	04/17/12	ug/L	10	U	10
L302	1,2-Dichloropropane	05/31/13	ug/L	10	U	10
L302	1,2-Dichloropropane	05/21/14	ug/L	10	U	10
L302	1,2-Dichloropropane	05/27/15	ug/L	50	U	50
L302	1,2-Dichloropropane	05/03/16	ug/L	50	U	50
L309	1,2-Dichloropropane	04/26/17	ug/L	50	U	50
L302	1,2-Dichloropropane	11/08/17	ug/L	50	U	50
L302	1,2-Dichloropropane	04/18/18	ug/L	10	U	10
L309	1,2-Dichloropropane	10/29/18	ug/L	50	U	50
L302	1,2-Dichloropropane	04/23/19	ug/L	10	U	10
L302	1,3,5-Trimethylbenzene	05/17/10	ug/L	20	U	20
L302	1,3,5-Trimethylbenzene	05/25/11	ug/L	15	U	15
L302	1,3,5-Trimethylbenzene	04/17/12	ug/L	15	U	15
L302	1,3,5-Trimethylbenzene	05/31/13	ug/L	50	U	50
L302	1,3,5-Trimethylbenzene	05/21/14	ug/L	15	U	15
L302	1,3,5-Trimethylbenzene	05/27/15	ug/L	50	U	50
L302	1,3,5-Trimethylbenzene	05/03/16	ug/L	50	U	50
L309	1,3,5-Trimethylbenzene	04/26/17	ug/L	50	U	50
L302	1,3,5-Trimethylbenzene	11/08/17	ug/L	50	U	50
L309	1,3,5-Trimethylbenzene	10/29/18	ug/L	50	U	50
L302	1,3,5-Trimethylbenzene	04/23/19	ug/L	29.1	U	29.1
L302	1,3-Dichlorobenzene	05/17/10	ug/L	20	U	20
L302	1,3-Dichlorobenzene	05/25/11	ug/L	15	U	15
L302	1,3-Dichlorobenzene	04/17/12	ug/L	15	U	15
L302	1,3-Dichlorobenzene	05/31/13	ug/L	15	U	15
L302	1,3-Dichlorobenzene	05/21/14	ug/L	15	U	15
L302	1,3-Dichlorobenzene	05/27/15	ug/L	50	U	50
L302	1,3-Dichlorobenzene	05/03/16	ug/L	50	U	50
L309	1,3-Dichlorobenzene	04/26/17	ug/L	50	U	50
L302	1,3-Dichlorobenzene	11/08/17	ug/L	50	U	50
L302	1,3-Dichlorobenzene	04/18/18	ug/L	15	U	15
L309	1,3-Dichlorobenzene	10/29/18	ug/L	50	U	50
L302	1,3-Dichlorobenzene	04/23/19	ug/L	20.9	U	20.9
L302	1,3-Dichloropropane	05/17/10	ug/L	20	U	20
L302	1,3-Dichloropropane	05/25/11	ug/L	20	U	20

L302	1,3-Dichloropropane	04/17/12	ug/L	20	U	20
L302	1,3-Dichloropropane	05/31/13	ug/L	20	U	20
L302	1,3-Dichloropropane	05/21/14	ug/L	20	U	20
L302	1,3-Dichloropropane	05/27/15	ug/L	50	U	50
L302	1,3-Dichloropropane	05/03/16	ug/L	50	U	50
L309	1,3-Dichloropropane	04/26/17	ug/L	50	U	50
L302	1,3-Dichloropropane	11/08/17	ug/L	50	U	50
L309	1,3-Dichloropropane	10/29/18	ug/L	50	U	50
L302	1,3-Dichloropropane	04/23/19	ug/L	27.5	U	27.5
L302	1,3-Dichloropropene	05/17/10	ug/L	40	U	40
L302	1,3-Dichloropropene	05/25/11	ug/L	20	U	20
L302	1,3-Dichloropropene	04/17/12	ug/L	20	U	20
L302	1,3-Dichloropropene	05/31/13	ug/L	20	U	20
L302	1,3-Dichloropropene	05/21/14	ug/L	20	U	20
L302	1,3-Dichloropropene	05/27/15	ug/L	50	U	50
L302	1,3-Dichloropropene	05/03/16	ug/L	50	U	50
L309	1,3-Dichloropropene	04/26/17	ug/L	50	U	50
L302	1,3-Dichloropropene	11/08/17	ug/L	50	U	50
L302	1,3-Dichloropropene	04/18/18	ug/L	20	U	20
L309	1,3-Dichloropropene	10/29/18	ug/L	50	U	50
L302	1,3-Dichloropropene	04/23/19	ug/L	267	U	267
L302	1,4-Dichlorobenzene	05/17/10	ug/L	80	U	80
L302	1,4-Dichlorobenzene	05/25/11	ug/L	75	U	75
L302	1,4-Dichlorobenzene	04/17/12	ug/L	75	U	75
L302	1,4-Dichlorobenzene	05/31/13	ug/L	75	U	75
L302	1,4-Dichlorobenzene	05/21/14	ug/L	75	U	75
L302	1,4-Dichlorobenzene	05/27/15	ug/L	75	U	75
L302	1,4-Dichlorobenzene	05/03/16	ug/L	50	U	50
L309	1,4-Dichlorobenzene	04/26/17	ug/L	50	U	50
L302	1,4-Dichlorobenzene	11/08/17	ug/L	50	U	50
LREP	1,4-Dichlorobenzene	11/08/17	ug/L	75	U	75
L302	1,4-Dichlorobenzene	04/18/18	ug/L	75	U	75
L309	1,4-Dichlorobenzene	10/29/18	ug/L	75	U	75
LREP	1,4-Dichlorobenzene	10/29/18	ug/L	75	U	75
L302	1,4-Dichlorobenzene	04/23/19	ug/L	75	U	75
L302	1-Propanol	05/17/10	ug/L	2500	U	2500
L302	1-Propanol	05/25/11	ug/L	2500	U	2500
L302	1-Propanol	05/22/12	ug/L	2500	U	2500
L302	1-Propanol	05/31/13	ug/L	2500	U	2500
L302	1-Propanol	05/21/14	ug/L	2500	U	2500
L302	1-Propanol	05/27/15	ug/L	2500	U	2500
L302	1-Propanol	05/03/16	ug/L	2500	U	2500
L309	1-Propanol	04/26/17	ug/L	2500	U	2500
L302	1-Propanol	11/08/17	ug/L	2500	U	2500
L309	1-Propanol	10/29/18	ug/L	5000	U	5000
L302	1-Propanol	04/23/19	ug/L	5000	U	5000
L302	2,2-Dichloropropane	05/17/10	ug/L	100	U	100
L302	2,2-Dichloropropane	05/25/11	ug/L	50	U	50
L302	2,2-Dichloropropane	04/17/12	ug/L	50	U	50
L302	2,2-Dichloropropane	05/31/13	ug/L	50	U	50
L302	2,2-Dichloropropane	05/21/14	ug/L	50	U	50

L302	2,2-Dichloropropane	05/27/15	ug/L	150	U	150
L302	2,2-Dichloropropane	05/03/16	ug/L	150	U	150
L309	2,2-Dichloropropane	04/26/17	ug/L	150	U	150
L302	2,2-Dichloropropane	11/08/17	ug/L	150	U	150
L309	2,2-Dichloropropane	10/29/18	ug/L	150	U	150
L302	2,2-Dichloropropane	04/23/19	ug/L	75.5	U	75.5
L302	2,4,5-tp (Sylvex)	05/17/10	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	05/25/11	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	04/17/12	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	05/31/13	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	05/21/14	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	05/27/15	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	05/03/16	ug/L	20	U	20
L309	2,4,5-tp (Sylvex)	04/26/17	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	11/08/17	ug/L	20	U	20
LREP	2,4,5-tp (Sylvex)	11/08/17	ug/L	20	U	20
L309	2,4,5-tp (Sylvex)	10/29/18	ug/L	20	U	20
LREP	2,4,5-tp (Sylvex)	10/29/18	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	04/23/19	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	05/17/10	ug/L	24.7	U	24.7
L302	2,4-Dichlorophenoxyacetic Acid	05/25/11	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	04/17/12	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	05/31/13	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	05/21/14	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	05/27/15	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	05/03/16	ug/L	20	U	20
L309	2,4-Dichlorophenoxyacetic Acid	04/26/17	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	11/08/17	ug/L	20	U	20
LREP	2,4-Dichlorophenoxyacetic Acid	11/08/17	ug/L	20	U	20
L309	2,4-Dichlorophenoxyacetic Acid	10/29/18	ug/L	20	U	20
LREP	2,4-Dichlorophenoxyacetic Acid	10/29/18	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	04/23/19	ug/L	20	U	20
L302	2-Chloroethyl Vinyl Ether	05/17/10	ug/L	10000	U	10000
L302	2-Chloroethyl Vinyl Ether	05/25/11	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	04/17/12	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	05/31/13	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	05/21/14	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	05/27/15	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	05/03/16	ug/L	50	U	50
L309	2-Chloroethyl Vinyl Ether	04/26/17	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	11/08/17	ug/L	50	U	50
L302	2-Chloroethyl Vinyl Ether	04/18/18	ug/L	50	U	50
L309	2-Chloroethyl Vinyl Ether	10/29/18	ug/L	100	U	100
L302	2-Chloroethyl Vinyl Ether	04/23/19	ug/L	100	U	100
L302	2-Hexanone	05/17/10	ug/L	200	U	200
L302	2-Hexanone	05/25/11	ug/L	100	U	100
L302	2-Hexanone	04/17/12	ug/L	100	U	100
L302	2-Hexanone	05/31/13	ug/L	100	U	100
L302	2-Hexanone	05/21/14	ug/L	100	U	100
L302	2-Hexanone	05/27/15	ug/L	500	U	500
L302	2-Hexanone	05/03/16	ug/L	500	U	500

L309	2-Hexanone	04/26/17	ug/L	500	U	500
L302	2-Hexanone	11/08/17	ug/L	500	U	500
L309	2-Hexanone	10/29/18	ug/L	500	U	500
L302	2-Hexanone	04/23/19	ug/L	100	U	100
L302	2-Propanol	05/17/10	ug/L	2500	U	2500
L302	2-Propanol	05/25/11	ug/L	2500	U	2500
L302	2-Propanol	05/22/12	ug/L	2500	U	2500
L302	2-Propanol	05/31/13	ug/L	2500	U	2500
L302	2-Propanol	05/21/14	ug/L	2500	U	2500
L302	2-Propanol	05/27/15	ug/L	2500	U	2500
L302	2-Propanol	05/03/16	ug/L	2500	U	2500
L309	2-Propanol	04/26/17	ug/L	2500	U	2500
L302	2-Propanol	11/08/17	ug/L	2500	U	2500
L309	2-Propanol	10/29/18	ug/L	2500	U	2500
L302	2-Propanol	04/23/19	ug/L	2500	U	2500
L302	4-Methyl-2-Pentanone (MIBK)	05/17/10	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	05/25/11	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	04/17/12	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	05/31/13	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	05/21/14	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	05/27/15	ug/L	500	U	500
L302	4-Methyl-2-Pentanone (MIBK)	05/03/16	ug/L	500	U	500
L309	4-Methyl-2-Pentanone (MIBK)	04/26/17	ug/L	500	U	500
L302	4-Methyl-2-Pentanone (MIBK)	11/08/17	ug/L	500	U	500
L309	4-Methyl-2-Pentanone (MIBK)	10/29/18	ug/L	500	U	500
L302	4-Methyl-2-Pentanone (MIBK)	04/23/19	ug/L	100	U	100
L302	4-Methylphenol (p-Cresol)	05/17/10	ug/L	500	U	500
L302	4-Methylphenol (p-Cresol)	05/25/11	ug/L	500	U	500
L302	4-Methylphenol (p-Cresol)	04/17/12	ug/L	1000	U	1000
L302	4-Methylphenol (p-Cresol)	05/21/14	ug/L	831		500
L302	4-Methylphenol (p-Cresol)	05/03/16	ug/L	500	U	500
L302	4-Methylphenol (p-Cresol)	04/23/19	ug/L	605		500
L302	Acetone	05/17/10	ug/L	1640		650
L302	Acetone	05/25/11	ug/L	500	U	500
L302	Acetone	04/17/12	ug/L	500	U	500
L302	Acetone	05/31/13	ug/L	1270		500
L302	Acetone	05/21/14	ug/L	2530		500
L302	Acetone	05/27/15	ug/L	1000	U	1000
L302	Acetone	05/03/16	ug/L	1000	U	1000
L309	Acetone	04/26/17	ug/L	1590		1000
L302	Acetone	11/08/17	ug/L	1410		1000
L309	Acetone	10/29/18	ug/L	1000	U	1000
L302	Acetone	04/23/19	ug/L	810		500
L302	Alachlor	05/17/10	ug/L	20	U	20
L302	Alachlor	05/25/11	ug/L	20	U	20
L302	Alachlor	05/22/12	ug/L	20	U	20
L302	Alachlor	05/31/13	ug/L	20	U	20
L302	Alachlor	05/21/14	ug/L	20	U	20
L302	Alachlor	05/27/15	ug/L	20	U	20
L302	Alachlor	05/03/16	ug/L	20	U	20
L309	Alachlor	04/26/17	ug/L	20	U	20

L302	Alachlor	11/08/17	ug/L	20	U	20
L309	Alachlor	10/29/18	ug/L	20	U	20
L302	Alachlor	04/23/19	ug/L	20	U	20
L302	Aldicarb	05/17/10	ug/L	30	U	30
L302	Aldicarb	05/25/11	ug/L	30	U	30
L302	Aldicarb	04/17/12	ug/L	120	U	120
L302	Aldicarb	05/31/13	ug/L	30	U	30
L302	Aldicarb	05/21/14	ug/L	30	U	30
L302	Aldicarb	05/27/15	ug/L	30	U	30
L302	Aldicarb	05/03/16	ug/L	30	U	30
L309	Aldicarb	04/26/17	ug/L	30	U	30
L302	Aldicarb	11/08/17	ug/L	30	U	30
L309	Aldicarb	10/29/18	ug/L	30	U	30
L302	Aldicarb	04/23/19	ug/L	30	U	30
L302	Aldrin	05/17/10	ug/L	10	U	10
L302	Aldrin	05/25/11	ug/L	10	U	10
L302	Aldrin	05/22/12	ug/L	10	U	10
L302	Aldrin	05/31/13	ug/L	10	U	10
L302	Aldrin	05/21/14	ug/L	10	U	10
L302	Aldrin	05/27/15	ug/L	10	U	10
L302	Aldrin	05/03/16	ug/L	10	U	10
L309	Aldrin	04/26/17	ug/L	10	U	10
L302	Aldrin	11/08/17	ug/L	10	U	10
L302	Aldrin	04/18/18	ug/L	10	U	10
L309	Aldrin	10/29/18	ug/L	10	U	10
L302	Aldrin	04/23/19	ug/L	10	U	10
L302	Aluminum, Total	05/17/10	ug/L	1000	U	1000
L302	Aluminum, Total	05/25/11	ug/L	1000	U	1000
L302	Aluminum, Total	04/17/12	ug/L	1000	U	1000
L302	Aluminum, Total	05/31/13	ug/L	1000	U	1000
L302	Aluminum, Total	05/21/14	ug/L	1000	U	1000
L302	Aluminum, Total	05/27/15	ug/L	5000	U	5000
L302	Aluminum, Total	05/03/16	ug/L	1000	U	1000
L309	Aluminum, Total	04/26/17	ug/L	1000	U	1000
L302	Aluminum, Total	11/08/17	ug/L	7760		1000
L309	Aluminum, Total	10/29/18	ug/L	1000	U	1000
L302	Aluminum, Total	04/23/19	ug/L	1000	U	1000
L302	Antimony, Total	05/17/10	ug/L	60	U	60
L302	Antimony, Total	05/25/11	ug/L	60	U	60
L302	Antimony, Total	04/17/12	ug/L	60	U	60
L302	Antimony, Total	05/31/13	ug/L	60	U	60
L302	Antimony, Total	05/21/14	ug/L	60	U	60
L302	Antimony, Total	05/27/15	ug/L	200	U	200
L302	Antimony, Total	05/03/16	ug/L	60	U	60
L309	Antimony, Total	04/26/17	ug/L	60	U	60
L302	Antimony, Total	11/08/17	ug/L	60	U	60
L302	Antimony, Total	04/18/18	ug/L	60	U	60
L309	Antimony, Total	10/29/18	ug/L	60	U	60
L302	Antimony, Total	04/23/19	ug/L	60	U	60
L302	Arsenic, Total	05/17/10	ug/L	47		20
L302	Arsenic, Total	05/25/11	ug/L	74.2		20

L302	Arsenic, Total	04/17/12	ug/L	229		20
L302	Arsenic, Total	05/31/13	ug/L	352		20
L302	Arsenic, Total	05/21/14	ug/L	284		20
L302	Arsenic, Total	05/27/15	ug/L	200	U	200
L302	Arsenic, Total	05/03/16	ug/L	81.5		20
L309	Arsenic, Total	04/26/17	ug/L	186		25
L302	Arsenic, Total	11/08/17	ug/L	311		20
LREP	Arsenic, Total	11/08/17	ug/L	314		20
L302	Arsenic, Total	04/18/18	ug/L	231		20
L309	Arsenic, Total	10/29/18	ug/L	342		20
LREP	Arsenic, Total	10/29/18	ug/L	334		20
L302	Arsenic, Total	04/23/19	ug/L	371		25
L302	Atrazine	05/17/10	ug/L	30	U	30
L302	Atrazine	05/25/11	ug/L	30	U	30
L302	Atrazine	05/22/12	ug/L	30	U	30
L302	Atrazine	05/31/13	ug/L	30	U	30
L302	Atrazine	05/21/14	ug/L	30	U	30
L302	Atrazine	05/27/15	ug/L	30	U	30
L302	Atrazine	05/03/16	ug/L	30	U	30
L309	Atrazine	04/26/17	ug/L	30	U	30
L302	Atrazine	11/08/17	ug/L	30	U	30
L309	Atrazine	10/29/18	ug/L	30	U	30
L302	Atrazine	04/23/19	ug/L	30	U	30
L302	Barium, Total	05/17/10	ug/L	1000	U	1000
L302	Barium, Total	05/25/11	ug/L	1000	U	1000
L302	Barium, Total	04/17/12	ug/L	1000	U	1000
L302	Barium, Total	05/31/13	ug/L	1000	U	1000
L302	Barium, Total	05/21/14	ug/L	1000	U	1000
L302	Barium, Total	05/27/15	ug/L	1000	U	1000
L302	Barium, Total	05/03/16	ug/L	252		1000
L309	Barium, Total	04/26/17	ug/L	1000	U	1000
L302	Barium, Total	11/08/17	ug/L	1000	U	1000
LREP	Barium, Total	11/08/17	ug/L	1000	U	1000
L309	Barium, Total	10/29/18	ug/L	1000	U	1000
LREP	Barium, Total	10/29/18	ug/L	1000	U	1000
L302	Barium, Total	04/23/19	ug/L	1000	U	1000
L302	Benzene	05/17/10	ug/L	20	U	20
L302	Benzene	05/25/11	ug/L	20	U	20
L302	Benzene	04/17/12	ug/L	20	U	20
L302	Benzene	05/31/13	ug/L	20	U	20
L302	Benzene	05/21/14	ug/L	20	U	20
L302	Benzene	05/27/15	ug/L	50	U	50
L302	Benzene	05/03/16	ug/L	50	U	50
L309	Benzene	04/26/17	ug/L	50	U	50
L302	Benzene	11/08/17	ug/L	50	U	50
LREP	Benzene	11/08/17	ug/L	50	U	50
L302	Benzene	04/18/18	ug/L	20	U	20
L309	Benzene	10/29/18	ug/L	50	U	50
LREP	Benzene	10/29/18	ug/L	50	U	50
L302	Benzene	04/23/19	ug/L	20	U	20
L302	Benzo (a) Pyrene	05/17/10	ug/L	100	U	100

L302	Benzo (a) Pyrene	05/25/11	ug/L	100	U	100
L302	Benzo (a) Pyrene	04/17/12	ug/L	150	U	150
L302	Benzo (a) Pyrene	05/31/13	ug/L	100	U	100
L302	Benzo (a) Pyrene	05/21/14	ug/L	100	U	100
L302	Benzo (a) Pyrene	05/27/15	ug/L	100	U	100
L302	Benzo (a) Pyrene	05/03/16	ug/L	100	U	100
L309	Benzo (a) Pyrene	04/26/17	ug/L	100	U	100
L302	Benzo (a) Pyrene	11/08/17	ug/L	100	U	100
L302	Benzo (a) Pyrene	04/18/18	ug/L	502	U	502
L309	Benzo (a) Pyrene	10/29/18	ug/L	100	U	100
L302	Benzo (a) Pyrene	04/23/19	ug/L	100	U	100
L302	Beryllium, Total	05/17/10	ug/L	40	U	40
L302	Beryllium, Total	05/25/11	ug/L	40	U	40
L302	Beryllium, Total	04/17/12	ug/L	40	U	40
L302	Beryllium, Total	05/31/13	ug/L	40	U	40
L302	Beryllium, Total	05/21/14	ug/L	40	U	40
L302	Beryllium, Total	05/27/15	ug/L	40	U	40
L302	Beryllium, Total	05/03/16	ug/L	10	U	10
L309	Beryllium, Total	04/26/17	ug/L	40	U	40
L302	Beryllium, Total	11/08/17	ug/L	40	U	40
L302	Beryllium, Total	04/18/18	ug/L	40	U	40
L309	Beryllium, Total	10/29/18	ug/L	40	U	40
L302	Beryllium, Total	04/23/19	ug/L	40	U	40
L302	beta-BHC	05/17/10	ug/L	1	U	1
L302	beta-BHC	05/25/11	ug/L	1	U	1
L302	beta-BHC	05/22/12	ug/L	1	U	1
L302	beta-BHC	05/31/13	ug/L	1	U	1
L302	beta-BHC	05/21/14	ug/L	1	U	1
L302	beta-BHC	05/27/15	ug/L	1	U	1
L302	beta-BHC	05/03/16	ug/L	1	U	1
L309	beta-BHC	04/26/17	ug/L	1	U	1
L302	beta-BHC	11/08/17	ug/L	1	U	1
L302	beta-BHC	04/18/18	ug/L	1	U	1
L309	beta-BHC	10/29/18	ug/L	1	U	1
L302	beta-BHC	04/23/19	ug/L	1	U	1
L302	bis (2-Chloro-1-Methylethyl) Ether	05/17/10	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	05/25/11	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	04/17/12	ug/L	220	U	220
L302	bis (2-Chloro-1-Methylethyl) Ether	05/31/13	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	05/21/14	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	05/27/15	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	05/03/16	ug/L	100	U	100
L309	bis (2-Chloro-1-Methylethyl) Ether	04/26/17	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	11/08/17	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	04/18/18	ug/L	407	U	407
L309	bis (2-Chloro-1-Methylethyl) Ether	10/29/18	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	04/23/19	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	05/17/10	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	05/25/11	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	04/17/12	ug/L	287		150
L302	bis (2-Ethylhexyl) Phthalate	05/31/13	ug/L	128		100

L302	bis (2-Ethylhexyl) Phthalate	05/21/14	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	05/27/15	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	05/03/16	ug/L	100	U	100
L309	bis (2-Ethylhexyl) Phthalate	04/26/17	ug/L	280		100
L302	bis (2-Ethylhexyl) Phthalate	11/08/17	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	04/18/18	ug/L	185	U	185
L309	bis (2-Ethylhexyl) Phthalate	10/29/18	ug/L	100	U	100
L302	bis (2-Ethylhexyl) Phthalate	04/23/19	ug/L	100	U	100
L302	Boron, Total	05/17/10	ug/L	4030		100
L302	Boron, Total	05/25/11	ug/L	5720		100
L302	Boron, Total	04/17/12	ug/L	8850		240
L302	Boron, Total	05/31/13	ug/L	12400		100
L302	Boron, Total	05/21/14	ug/L	10000		100
L302	Boron, Total	05/27/15	ug/L	9500		1000
L302	Boron, Total	05/03/16	ug/L	4450		100
L309	Boron, Total	04/26/17	ug/L	9820		100
L302	Boron, Total	11/08/17	ug/L	12100		100
L309	Boron, Total	10/29/18	ug/L	14400		100
L302	Boron, Total	04/23/19	ug/L	10900		100
L302	Bromobenzene	05/17/10	ug/L	30	U	30
L302	Bromobenzene	05/25/11	ug/L	20	U	20
L302	Bromobenzene	04/17/12	ug/L	20	U	20
L302	Bromobenzene	05/31/13	ug/L	20	U	20
L302	Bromobenzene	05/21/14	ug/L	20	U	20
L302	Bromobenzene	05/27/15	ug/L	50	U	50
L302	Bromobenzene	05/03/16	ug/L	50	U	50
L309	Bromobenzene	04/26/17	ug/L	50	U	50
L302	Bromobenzene	11/08/17	ug/L	50	U	50
L309	Bromobenzene	10/29/18	ug/L	50	U	50
L302	Bromobenzene	04/23/19	ug/L	20	U	20
L302	Bromochloromethane	05/17/10	ug/L	40	U	40
L302	Bromochloromethane	05/25/11	ug/L	20	U	20
L302	Bromochloromethane	04/17/12	ug/L	20	U	20
L302	Bromochloromethane	05/31/13	ug/L	20	U	20
L302	Bromochloromethane	05/21/14	ug/L	20	U	20
L302	Bromochloromethane	05/27/15	ug/L	20	U	20
L302	Bromochloromethane	05/03/16	ug/L	10	U	10
L309	Bromochloromethane	04/26/17	ug/L	10	U	10
L302	Bromochloromethane	11/08/17	ug/L	10	U	10
L309	Bromochloromethane	10/29/18	ug/L	20	U	20
L302	Bromochloromethane	04/23/19	ug/L	50	U	50
L302	Bromodichloromethane	05/17/10	ug/L	40	U	40
L302	Bromodichloromethane	05/25/11	ug/L	20	U	20
L302	Bromodichloromethane	04/17/12	ug/L	20	U	20
L302	Bromodichloromethane	05/31/13	ug/L	20	U	20
L302	Bromodichloromethane	05/21/14	ug/L	20	U	20
L302	Bromodichloromethane	05/27/15	ug/L	50	U	50
L302	Bromodichloromethane	05/03/16	ug/L	50	U	50
L309	Bromodichloromethane	04/26/17	ug/L	50	U	50
L302	Bromodichloromethane	11/08/17	ug/L	50	U	50
L302	Bromodichloromethane	04/18/18	ug/L	20	U	20

L309	Bromodichloromethane	10/29/18	ug/L	50	U	50
L302	Bromodichloromethane	04/23/19	ug/L	20	U	20
L302	Bromoform	05/17/10	ug/L	20	U	20
L302	Bromoform	05/25/11	ug/L	20	U	20
L302	Bromoform	04/17/12	ug/L	20	U	20
L302	Bromoform	05/31/13	ug/L	20	U	20
L302	Bromoform	05/21/14	ug/L	20	U	20
L302	Bromoform	05/27/15	ug/L	100	U	100
L302	Bromoform	05/03/16	ug/L	100	U	100
L309	Bromoform	04/26/17	ug/L	100	U	100
L302	Bromoform	11/08/17	ug/L	100	U	100
L302	Bromoform	04/18/18	ug/L	20	U	20
L309	Bromoform	10/29/18	ug/L	100	U	100
L302	Bromoform	04/23/19	ug/L	132	U	132
L302	Bromomethane (Methyl Bromide)	05/17/10	ug/L	100	U	100
L302	Bromomethane (Methyl Bromide)	05/25/11	ug/L	20	U	20
L302	Bromomethane (Methyl Bromide)	04/17/12	ug/L	20	U	20
L302	Bromomethane (Methyl Bromide)	05/31/13	ug/L	50	U	50
L302	Bromomethane (Methyl Bromide)	05/21/14	ug/L	50	U	50
L302	Bromomethane (Methyl Bromide)	05/27/15	ug/L	100	U	100
L302	Bromomethane (Methyl Bromide)	05/03/16	ug/L	100	U	100
L309	Bromomethane (Methyl Bromide)	04/26/17	ug/L	100	U	100
L302	Bromomethane (Methyl Bromide)	11/08/17	ug/L	100	U	100
L302	Bromomethane (Methyl Bromide)	04/18/18	ug/L	50	U	50
L309	Bromomethane (Methyl Bromide)	10/29/18	ug/L	100	U	100
L302	Bromomethane (Methyl Bromide)	04/23/19	ug/L	50	U	50
L302	Cadmium, Total	05/17/10	ug/L	25	U	25
L302	Cadmium, Total	05/25/11	ug/L	25	U	25
L302	Cadmium, Total	04/17/12	ug/L	25	U	25
L302	Cadmium, Total	05/31/13	ug/L	25	U	25
L302	Cadmium, Total	05/21/14	ug/L	25	U	25
L302	Cadmium, Total	05/27/15	ug/L	50	U	50
L302	Cadmium, Total	05/03/16	ug/L	25	U	25
L309	Cadmium, Total	04/26/17	ug/L	25	U	25
L302	Cadmium, Total	11/08/17	ug/L	25	U	25
LREP	Cadmium, Total	11/08/17	ug/L	25	U	25
L302	Cadmium, Total	04/18/18	ug/L	25	U	25
L309	Cadmium, Total	10/29/18	ug/L	25	U	25
LREP	Cadmium, Total	10/29/18	ug/L	25	U	25
L302	Cadmium, Total	04/23/19	ug/L	25	U	25
L302	Calcium, Total	05/17/10	ug/L	306000		10000
L302	Calcium, Total	05/25/11	ug/L	133000		10000
L302	Calcium, Total	04/17/12	ug/L	136000		10000
L302	Calcium, Total	05/31/13	ug/L	92100		10000
L302	Calcium, Total	05/21/14	ug/L	173000		10000
L302	Calcium, Total	05/27/15	ug/L	95000		10000
L302	Calcium, Total	05/03/16	ug/L	178000		1000
L309	Calcium, Total	04/26/17	ug/L	193000		10000
L302	Calcium, Total	11/08/17	ug/L	147000		10000
L309	Calcium, Total	10/29/18	ug/L	40800		10000
L302	Calcium, Total	04/23/19	ug/L	60200		10000

L302	Carbofuran	05/17/10	ug/L	400	U	400
L302	Carbofuran	05/25/11	ug/L	400	U	400
L302	Carbofuran	04/17/12	ug/L	400	U	400
L302	Carbofuran	05/31/13	ug/L	400	U	400
L302	Carbofuran	05/21/14	ug/L	400	U	400
L302	Carbofuran	05/27/15	ug/L	400	U	400
L302	Carbofuran	05/03/16	ug/L	400	U	400
L309	Carbofuran	04/26/17	ug/L	400	U	400
L302	Carbofuran	11/08/17	ug/L	400	U	400
L309	Carbofuran	10/29/18	ug/L	400	U	400
L302	Carbofuran	04/23/19	ug/L	400	U	400
L302	Carbon Disulfide	05/17/10	ug/L	100	U	100
L302	Carbon Disulfide	05/25/11	ug/L	20	U	20
L302	Carbon Disulfide	04/17/12	ug/L	20	U	20
L302	Carbon Disulfide	05/31/13	ug/L	50	U	50
L302	Carbon Disulfide	05/21/14	ug/L	50	U	50
L302	Carbon Disulfide	05/27/15	ug/L	50	U	50
L302	Carbon Disulfide	05/03/16	ug/L	50	U	50
L309	Carbon Disulfide	04/26/17	ug/L	50	U	50
L302	Carbon Disulfide	11/08/17	ug/L	50	U	50
L309	Carbon Disulfide	10/29/18	ug/L	50	U	50
L302	Carbon Disulfide	04/23/19	ug/L	50	U	50
L302	Carbon Tetrachloride	05/17/10	ug/L	30	U	30
L302	Carbon Tetrachloride	05/25/11	ug/L	20	U	20
L302	Carbon Tetrachloride	04/17/12	ug/L	20	U	20
L302	Carbon Tetrachloride	05/31/13	ug/L	20	U	20
L302	Carbon Tetrachloride	05/21/14	ug/L	20	U	20
L302	Carbon Tetrachloride	05/27/15	ug/L	50	U	50
L302	Carbon Tetrachloride	05/03/16	ug/L	50	U	50
L309	Carbon Tetrachloride	04/26/17	ug/L	50	U	50
L302	Carbon Tetrachloride	11/08/17	ug/L	50	U	50
LREP	Carbon Tetrachloride	11/08/17	ug/L	50	U	50
L302	Carbon Tetrachloride	04/18/18	ug/L	20	U	20
L309	Carbon Tetrachloride	10/29/18	ug/L	50	U	50
LREP	Carbon Tetrachloride	10/29/18	ug/L	50	U	50
L302	Carbon Tetrachloride	04/23/19	ug/L	20	U	20
L302	Chlordane	05/17/10	ug/L	10	U	10
L302	Chlordane	05/25/11	ug/L	10	U	10
L302	Chlordane	05/22/12	ug/L	10	U	10
L302	Chlordane	05/31/13	ug/L	10	U	10
L302	Chlordane	05/21/14	ug/L	10	U	10
L302	Chlordane	05/27/15	ug/L	10	U	10
L302	Chlordane	05/03/16	ug/L	10	U	10
L309	Chlordane	04/26/17	ug/L	10	U	10
L302	Chlordane	11/08/17	ug/L	10	U	10
LREP	Chlordane	11/08/17	ug/L	10	U	10
L302	Chlordane	04/18/18	ug/L	10	U	10
L309	Chlordane	10/29/18	ug/L	10	U	10
LREP	Chlordane	10/29/18	ug/L	10	U	10
L302	Chlordane	04/23/19	ug/L	10	U	10
L302	Chloride, Total	05/17/10	ug/L	684000		20000

L302	Chloride, Total	05/25/11	ug/L	1070000		20000
L302	Chloride, Total	04/17/12	ug/L	1870000		50000
L302	Chloride, Total	05/31/13	ug/L	2420000		400000
L302	Chloride, Total	05/21/14	ug/L	1810000		400000
L302	Chloride, Total	05/27/15	ug/L	2030000		200000
L302	Chloride, Total	05/03/16	ug/L	976000		400000
L309	Chloride, Total	04/26/17	ug/L	2300000		200000
L302	Chloride, Total	11/08/17	ug/L	2730000		50000
L309	Chloride, Total	10/29/18	ug/L	3030000		50000
L302	Chloride, Total	04/23/19	ug/L	2480000		200000
L302	Chlorobenzene	05/17/10	ug/L	20	U	20
L302	Chlorobenzene	05/25/11	ug/L	20	U	20
L302	Chlorobenzene	04/17/12	ug/L	20	U	20
L302	Chlorobenzene	05/31/13	ug/L	20	U	20
L302	Chlorobenzene	05/21/14	ug/L	20	U	20
L302	Chlorobenzene	05/27/15	ug/L	50	U	50
L302	Chlorobenzene	05/03/16	ug/L	50	U	50
L309	Chlorobenzene	04/26/17	ug/L	50	U	50
L302	Chlorobenzene	11/08/17	ug/L	50	U	50
LREP	Chlorobenzene	11/08/17	ug/L	50	U	50
L302	Chlorobenzene	04/18/18	ug/L	20	U	20
L309	Chlorobenzene	10/29/18	ug/L	50	U	50
LREP	Chlorobenzene	10/29/18	ug/L	50	U	50
L302	Chlorobenzene	04/23/19	ug/L	23.7	U	23.7
L302	Chloroethane	05/17/10	ug/L	70	U	70
L302	Chloroethane	05/25/11	ug/L	20	U	20
L302	Chloroethane	04/17/12	ug/L	20	U	20
L302	Chloroethane	05/31/13	ug/L	20	U	20
L302	Chloroethane	05/21/14	ug/L	20	U	20
L302	Chloroethane	05/27/15	ug/L	100	U	100
L302	Chloroethane	05/03/16	ug/L	100	U	100
L309	Chloroethane	04/26/17	ug/L	100	U	100
L302	Chloroethane	11/08/17	ug/L	100	U	100
L302	Chloroethane	04/18/18	ug/L	20	U	20
L309	Chloroethane	10/29/18	ug/L	100	U	100
L302	Chloroethane	04/23/19	ug/L	50	U	50
L302	Chloroform	05/17/10	ug/L	20	U	20
L302	Chloroform	05/25/11	ug/L	20	U	20
L302	Chloroform	04/17/12	ug/L	20	U	20
L302	Chloroform	05/31/13	ug/L	50	U	50
L302	Chloroform	05/21/14	ug/L	50	U	50
L302	Chloroform	05/27/15	ug/L	50	U	50
L302	Chloroform	05/03/16	ug/L	50	U	50
L309	Chloroform	04/26/17	ug/L	50	U	50
L302	Chloroform	11/08/17	ug/L	50	U	50
LREP	Chloroform	11/08/17	ug/L	50	U	50
L302	Chloroform	04/18/18	ug/L	50	U	50
L309	Chloroform	10/29/18	ug/L	50	U	50
LREP	Chloroform	10/29/18	ug/L	50	U	50
L302	Chloroform	04/23/19	ug/L	50	U	50
L302	Chloromethane (Methyl Chloride)	05/17/10	ug/L	40	U	40

L302	Chloromethane (Methyl Chloride)	05/25/11	ug/L	20	U	20
L302	Chloromethane (Methyl Chloride)	04/17/12	ug/L	20	U	20
L302	Chloromethane (Methyl Chloride)	05/31/13	ug/L	20	U	20
L302	Chloromethane (Methyl Chloride)	05/21/14	ug/L	20	U	20
L302	Chloromethane (Methyl Chloride)	05/27/15	ug/L	100	U	100
L302	Chloromethane (Methyl Chloride)	05/03/16	ug/L	100	U	100
L309	Chloromethane (Methyl Chloride)	04/26/17	ug/L	100	U	100
L302	Chloromethane (Methyl Chloride)	11/08/17	ug/L	100	U	100
L302	Chloromethane (Methyl Chloride)	04/18/18	ug/L	20	U	20
L309	Chloromethane (Methyl Chloride)	10/29/18	ug/L	100	U	100
L302	Chloromethane (Methyl Chloride)	04/23/19	ug/L	73	U	73
L302	Chromium, Total	05/17/10	ug/L	51.3		25
L302	Chromium, Total	05/25/11	ug/L	69		25
L302	Chromium, Total	04/17/12	ug/L	157		25
L302	Chromium, Total	05/31/13	ug/L	270		25
L302	Chromium, Total	05/21/14	ug/L	240		25
L302	Chromium, Total	05/27/15	ug/L	221		50
L302	Chromium, Total	05/03/16	ug/L	133		25
L309	Chromium, Total	04/26/17	ug/L	363		25
L302	Chromium, Total	11/08/17	ug/L	372		25
LREP	Chromium, Total	11/08/17	ug/L	356		25
L302	Chromium, Total	04/18/18	ug/L	236		25
L309	Chromium, Total	10/29/18	ug/L	540		25
LREP	Chromium, Total	10/29/18	ug/L	538		25
L302	Chromium, Total	04/23/19	ug/L	490		25
L302	cis-1,2-Dichloroethene	05/17/10	ug/L	40	U	40
L302	cis-1,2-Dichloroethene	05/25/11	ug/L	20	U	20
L302	cis-1,2-Dichloroethene	04/17/12	ug/L	20	U	20
L302	cis-1,2-Dichloroethene	05/31/13	ug/L	20	U	20
L302	cis-1,2-Dichloroethene	05/21/14	ug/L	20	U	20
L302	cis-1,2-Dichloroethene	05/27/15	ug/L	50	U	50
L302	cis-1,2-Dichloroethene	05/03/16	ug/L	50	U	50
L309	cis-1,2-Dichloroethene	04/26/17	ug/L	50	U	50
L302	cis-1,2-Dichloroethene	11/08/17	ug/L	50	U	50
L309	cis-1,2-Dichloroethene	10/29/18	ug/L	50	U	50
L302	cis-1,2-Dichloroethene	04/23/19	ug/L	20	U	20
L302	Cobalt, Total	05/17/10	ug/L	200	U	200
L302	Cobalt, Total	05/25/11	ug/L	200	U	200
L302	Cobalt, Total	04/17/12	ug/L	200	U	200
L302	Cobalt, Total	05/31/13	ug/L	200	U	200
L302	Cobalt, Total	05/21/14	ug/L	200	U	200
L302	Cobalt, Total	05/27/15	ug/L	200	U	200
L302	Cobalt, Total	05/03/16	ug/L	200	U	200
L309	Cobalt, Total	04/26/17	ug/L	200	U	200
L302	Cobalt, Total	11/08/17	ug/L	200	U	200
L309	Cobalt, Total	10/29/18	ug/L	200	U	200
L302	Cobalt, Total	04/23/19	ug/L	200	U	200
L302	Copper, Total	05/17/10	ug/L	50	U	50
L302	Copper, Total	05/25/11	ug/L	50	U	50
L302	Copper, Total	04/17/12	ug/L	50	U	50
L302	Copper, Total	05/31/13	ug/L	50	U	50

L302	Copper, Total	05/21/14	ug/L	50	U	50
L302	Copper, Total	05/27/15	ug/L	100	U	100
L302	Copper, Total	05/03/16	ug/L	50	U	50
L309	Copper, Total	04/26/17	ug/L	50	U	50
L302	Copper, Total	11/08/17	ug/L	50	U	50
L302	Copper, Total	04/18/18	ug/L	50	U	50
L309	Copper, Total	10/29/18	ug/L	50	U	50
L302	Copper, Total	04/23/19	ug/L	50	U	50
L302	Cyanide, Total	05/17/10	ug/L	50	U	50
L302	Cyanide, Total	05/25/11	ug/L	50	U	50
L302	Cyanide, Total	04/17/12	ug/L	50	U	50
L302	Cyanide, Total	05/31/13	ug/L	120	U	120
L302	Cyanide, Total	05/21/14	ug/L	50	U	50
L302	Cyanide, Total	05/27/15	ug/L	50	U	50
L302	Cyanide, Total	05/03/16	ug/L	50	U	50
L309	Cyanide, Total	04/26/17	ug/L	50	U	50
L302	Cyanide, Total	11/08/17	ug/L	50	U	50
L302	Cyanide, Total	04/18/18	ug/L	50	U	50
L309	Cyanide, Total	10/29/18	ug/L	50	U	50
L302	Cyanide, Total	04/23/19	ug/L	50	U	50
L302	DDT	05/31/13	ug/L	10	U	10
L302	DDT	05/21/14	ug/L	10	U	10
L302	Dibromochloromethane	05/17/10	ug/L	40	U	40
L302	Dibromochloromethane	05/25/11	ug/L	20	U	20
L302	Dibromochloromethane	04/17/12	ug/L	20	U	20
L302	Dibromochloromethane	05/31/13	ug/L	50	U	50
L302	Dibromochloromethane	05/21/14	ug/L	20	U	20
L302	Dibromochloromethane	05/27/15	ug/L	50	U	50
L302	Dibromochloromethane	05/03/16	ug/L	50	U	50
L309	Dibromochloromethane	04/26/17	ug/L	50	U	50
L302	Dibromochloromethane	11/08/17	ug/L	50	U	50
L302	Dibromochloromethane	04/18/18	ug/L	20	U	20
L309	Dibromochloromethane	10/29/18	ug/L	50	U	50
L302	Dibromochloromethane	04/23/19	ug/L	86.7	U	86.7
L302	Dibromomethane (Methylene Bromide)	05/17/10	ug/L	40	U	40
L302	Dibromomethane (Methylene Bromide)	05/25/11	ug/L	20	U	20
L302	Dibromomethane (Methylene Bromide)	04/17/12	ug/L	20	U	20
L302	Dibromomethane (Methylene Bromide)	05/31/13	ug/L	20	U	20
L302	Dibromomethane (Methylene Bromide)	05/21/14	ug/L	20	U	20
L302	Dibromomethane (Methylene Bromide)	05/27/15	ug/L	100	U	100
L302	Dibromomethane (Methylene Bromide)	05/03/16	ug/L	100	U	100
L309	Dibromomethane (Methylene Bromide)	04/26/17	ug/L	100	U	100
L302	Dibromomethane (Methylene Bromide)	11/08/17	ug/L	100	U	100
L309	Dibromomethane (Methylene Bromide)	10/29/18	ug/L	100	U	100
L302	Dibromomethane (Methylene Bromide)	04/23/19	ug/L	31.2	U	31.2
L302	Dichlorodifluoromethane	05/17/10	ug/L	30	U	30
L302	Dichlorodifluoromethane	05/25/11	ug/L	20	U	20
L302	Dichlorodifluoromethane	04/17/12	ug/L	20	U	20
L302	Dichlorodifluoromethane	05/31/13	ug/L	20	U	20
L302	Dichlorodifluoromethane	05/21/14	ug/L	20	U	20
L302	Dichlorodifluoromethane	05/27/15	ug/L	50	U	50

L302	Dichlorodifluoromethane	05/03/16	ug/L	50	U	50
L309	Dichlorodifluoromethane	04/26/17	ug/L	50	U	50
L302	Dichlorodifluoromethane	11/08/17	ug/L	50	U	50
L309	Dichlorodifluoromethane	10/29/18	ug/L	50	U	50
L302	Dichlorodifluoromethane	04/23/19	ug/L	50	U	50
L302	Dieldrin	05/17/10	ug/L	10	U	10
L302	Dieldrin	05/25/11	ug/L	10	U	10
L302	Dieldrin	05/22/12	ug/L	10	U	10
L302	Dieldrin	05/31/13	ug/L	10	U	10
L302	Dieldrin	05/21/14	ug/L	10	U	10
L302	Dieldrin	05/27/15	ug/L	10	U	10
L302	Dieldrin	05/03/16	ug/L	10	U	10
L309	Dieldrin	04/26/17	ug/L	10	U	10
L302	Dieldrin	11/08/17	ug/L	10	U	10
L302	Dieldrin	04/18/18	ug/L	10	U	10
L309	Dieldrin	10/29/18	ug/L	10	U	10
L302	Dieldrin	04/23/19	ug/L	10	U	10
L302	Diethyl Phthalate	05/17/10	ug/L	100	U	100
L302	Diethyl Phthalate	05/25/11	ug/L	100	U	100
L302	Diethyl Phthalate	04/17/12	ug/L	160	U	160
L302	Diethyl Phthalate	05/31/13	ug/L	100	U	100
L302	Diethyl Phthalate	05/21/14	ug/L	100	U	100
L302	Diethyl Phthalate	05/27/15	ug/L	100	U	100
L302	Diethyl Phthalate	05/03/16	ug/L	100	U	100
L309	Diethyl Phthalate	04/26/17	ug/L	100	U	100
L302	Diethyl Phthalate	11/08/17	ug/L	100	U	100
L302	Diethyl Phthalate	04/18/18	ug/L	289	U	289
L309	Diethyl Phthalate	10/29/18	ug/L	100	U	100
L302	Diethyl Phthalate	04/23/19	ug/L	100	U	100
L302	Dimethyl Phthalate	05/17/10	ug/L	100	U	100
L302	Dimethyl Phthalate	05/25/11	ug/L	100	U	100
L302	Dimethyl Phthalate	04/17/12	ug/L	180	U	180
L302	Dimethyl Phthalate	05/31/13	ug/L	100	U	100
L302	Dimethyl Phthalate	05/21/14	ug/L	100	U	100
L302	Dimethyl Phthalate	05/27/15	ug/L	100	U	100
L302	Dimethyl Phthalate	05/03/16	ug/L	100	U	100
L309	Dimethyl Phthalate	04/26/17	ug/L	100	U	100
L302	Dimethyl Phthalate	11/08/17	ug/L	100	U	100
L302	Dimethyl Phthalate	04/18/18	ug/L	515	U	515
L309	Dimethyl Phthalate	10/29/18	ug/L	100	U	100
L302	Dimethyl Phthalate	04/23/19	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	05/17/10	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	05/25/11	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	04/17/12	ug/L	200	U	200
L302	Di-N-Butyl Phthalate	05/31/13	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	05/21/14	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	05/27/15	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	05/03/16	ug/L	100	U	100
L309	Di-N-Butyl Phthalate	04/26/17	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	11/08/17	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	04/18/18	ug/L	684	U	684

L309	Di-N-Butyl Phthalate	10/29/18	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	04/23/19	ug/L	100	U	100
L302	Endrin	05/17/10	ug/L	2	U	2
L302	Endrin	05/25/11	ug/L	2	U	2
L302	Endrin	05/22/12	ug/L	2	U	2
L302	Endrin	05/31/13	ug/L	2	U	2
L302	Endrin	05/21/14	ug/L	2	U	2
L302	Endrin	05/27/15	ug/L	2	U	2
L302	Endrin	05/03/16	ug/L	2	U	2
L309	Endrin	04/26/17	ug/L	2	U	2
L302	Endrin	11/08/17	ug/L	2	U	2
LREP	Endrin	11/08/17	ug/L	2	U	2
L302	Endrin	04/18/18	ug/L	2	U	2
L309	Endrin	10/29/18	ug/L	2	U	2
LREP	Endrin	10/29/18	ug/L	2	U	2
L302	Endrin	04/23/19	ug/L	2	U	2
L302	Ethylbenzene	05/17/10	ug/L	20	U	20
L302	Ethylbenzene	05/25/11	ug/L	20	U	20
L302	Ethylbenzene	04/17/12	ug/L	20	U	20
L302	Ethylbenzene	05/31/13	ug/L	20	U	20
L302	Ethylbenzene	05/21/14	ug/L	20	U	20
L302	Ethylbenzene	05/27/15	ug/L	50	U	50
L302	Ethylbenzene	05/03/16	ug/L	50	U	50
L309	Ethylbenzene	04/26/17	ug/L	50	U	50
L302	Ethylbenzene	11/08/17	ug/L	50	U	50
L302	Ethylbenzene	04/18/18	ug/L	20	U	20
L309	Ethylbenzene	10/29/18	ug/L	50	U	50
L302	Ethylbenzene	04/23/19	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	05/17/10	ug/L	30	U	30
L302	Ethylene Dibromide (EDB)	05/25/11	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	04/17/12	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	05/31/13	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	05/21/14	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	05/27/15	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	05/03/16	ug/L	10	U	10
L309	Ethylene Dibromide (EDB)	04/26/17	ug/L	10	U	10
L302	Ethylene Dibromide (EDB)	11/08/17	ug/L	20	U	20
L309	Ethylene Dibromide (EDB)	10/29/18	ug/L	27.6	U	27.6
L302	Ethylene Dibromide (EDB)	04/23/19	ug/L	27.6	U	27.6
L302	Fluoride, Total	05/17/10	ug/L	500	U	500
L302	Fluoride, Total	05/25/11	ug/L	500	U	500
L302	Fluoride, Total	04/17/12	ug/L	500	U	500
L302	Fluoride, Total	05/31/13	ug/L	40000	U	40000
L302	Fluoride, Total	05/21/14	ug/L	41000		8000
L302	Fluoride, Total	05/27/15	ug/L	8500		8000
L302	Fluoride, Total	05/03/16	ug/L	8000	U	8000
L309	Fluoride, Total	04/26/17	ug/L	9700		6000
L302	Fluoride, Total	11/08/17	ug/L	16500		10000
L309	Fluoride, Total	10/29/18	ug/L	10000	U	10000
L302	Fluoride, Total	04/23/19	ug/L	30000	U	30000
L302	Heptachlor	05/17/10	ug/L	1	U	1

L302	Heptachlor	05/25/11	ug/L	1	U	1
L302	Heptachlor	05/22/12	ug/L	1	U	1
L302	Heptachlor	05/31/13	ug/L	1	U	1
L302	Heptachlor	05/21/14	ug/L	1	U	1
L302	Heptachlor	05/27/15	ug/L	1	U	1
L302	Heptachlor	05/03/16	ug/L	1	U	1
L309	Heptachlor	04/26/17	ug/L	1	U	1
L302	Heptachlor	11/08/17	ug/L	1	U	1
LREP	Heptachlor	11/08/17	ug/L	1	U	1
L302	Heptachlor	04/18/18	ug/L	1	U	1
L309	Heptachlor	10/29/18	ug/L	1	U	1
LREP	Heptachlor	10/29/18	ug/L	1	U	1
L302	Heptachlor	04/23/19	ug/L	1	U	1
L302	Heptachlor Epoxide	05/17/10	ug/L	10	U	10
L302	Heptachlor Epoxide	05/25/11	ug/L	10	U	10
L302	Heptachlor Epoxide	05/22/12	ug/L	10	U	10
L302	Heptachlor Epoxide	05/31/13	ug/L	10	U	10
L302	Heptachlor Epoxide	05/21/14	ug/L	10	U	10
L302	Heptachlor Epoxide	05/27/15	ug/L	10	U	10
L302	Heptachlor Epoxide	05/03/16	ug/L	8	U	8
L309	Heptachlor Epoxide	04/26/17	ug/L	8	U	8
L302	Heptachlor Epoxide	11/08/17	ug/L	5	U	5
LREP	Heptachlor Epoxide	11/08/17	ug/L	5	U	5
L302	Heptachlor Epoxide	04/18/18	ug/L	5	U	5
L309	Heptachlor Epoxide	10/29/18	ug/L	5	U	5
LREP	Heptachlor Epoxide	10/29/18	ug/L	5	U	5
L302	Heptachlor Epoxide	04/23/19	ug/L	5	U	5
L302	Hexachlorobutadiene	05/17/10	ug/L	100	U	100
L302	Hexachlorobutadiene	05/25/11	ug/L	100	U	100
L302	Hexachlorobutadiene	04/17/12	ug/L	220	U	220
L302	Hexachlorobutadiene	05/31/13	ug/L	100	U	100
L302	Hexachlorobutadiene	05/21/14	ug/L	100	U	100
L302	Hexachlorobutadiene	05/27/15	ug/L	100	U	100
L302	Hexachlorobutadiene	05/03/16	ug/L	100	U	100
L309	Hexachlorobutadiene	04/26/17	ug/L	100	U	100
L302	Hexachlorobutadiene	11/08/17	ug/L	100	U	100
LREP	Hexachlorobutadiene	11/08/17	ug/L	100	U	100
L302	Hexachlorobutadiene	04/18/18	ug/L	100	U	100
L309	Hexachlorobutadiene	10/29/18	ug/L	100	U	100
LREP	Hexachlorobutadiene	10/29/18	ug/L	100	U	100
L302	Hexachlorobutadiene	04/23/19	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	05/17/10	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	05/25/11	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	04/17/12	ug/L	220	U	220
L302	Hexachlorocyclopentadiene	05/31/13	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	05/21/14	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	05/27/15	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	05/03/16	ug/L	100	U	100
L309	Hexachlorocyclopentadiene	04/26/17	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	11/08/17	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	04/18/18	ug/L	181	U	181

L309	Hexachlorocyclopentadiene	10/29/18	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	04/23/19	ug/L	100	U	100
L302	Iodomethane	05/17/10	ug/L	150	U	150
L302	Iodomethane	05/25/11	ug/L	20	U	20
L302	Iodomethane	04/17/12	ug/L	20	U	20
L302	Iodomethane	05/31/13	ug/L	50	U	50
L302	Iodomethane	05/21/14	ug/L	50	U	50
L302	Iodomethane	05/27/15	ug/L	50	U	50
L302	Iodomethane	05/03/16	ug/L	50	U	50
L309	Iodomethane	04/26/17	ug/L	50	U	50
L302	Iodomethane	11/08/17	ug/L	50	U	50
L309	Iodomethane	10/29/18	ug/L	88.7	U	88.7
L302	Iodomethane	04/23/19	ug/L	296	U	296
L302	Iron, Total	05/17/10	ug/L	13700		200
L302	Iron, Total	05/25/11	ug/L	2670		200
L302	Iron, Total	04/17/12	ug/L	3260		200
L302	Iron, Total	05/31/13	ug/L	6400		200
L302	Iron, Total	05/21/14	ug/L	6940		200
L302	Iron, Total	05/27/15	ug/L	3640		1000
L302	Iron, Total	05/03/16	ug/L	6240		200
L309	Iron, Total	04/26/17	ug/L	4020		200
L302	Iron, Total	11/08/17	ug/L	15200		200
L309	Iron, Total	10/29/18	ug/L	2600		200
L302	Iron, Total	04/23/19	ug/L	2530		246
L302	Isopropylbenzene	05/17/10	ug/L	20	U	20
L302	Isopropylbenzene	05/25/11	ug/L	20	U	20
L302	Isopropylbenzene	04/17/12	ug/L	20	U	20
L302	Isopropylbenzene	05/31/13	ug/L	20	U	20
L302	Isopropylbenzene	05/21/14	ug/L	20	U	20
L302	Isopropylbenzene	05/27/15	ug/L	50	U	50
L302	Isopropylbenzene	05/03/16	ug/L	50	U	50
L309	Isopropylbenzene	04/26/17	ug/L	50	U	50
L302	Isopropylbenzene	11/08/17	ug/L	50	U	50
L309	Isopropylbenzene	10/29/18	ug/L	50	U	50
L302	Isopropylbenzene	04/23/19	ug/L	50	U	50
L302	Lead, Total	05/17/10	ug/L	25	U	25
L302	Lead, Total	05/25/11	ug/L	25	U	25
L302	Lead, Total	04/17/12	ug/L	25	U	25
L302	Lead, Total	05/31/13	ug/L	25	U	25
L302	Lead, Total	05/21/14	ug/L	25	U	25
L302	Lead, Total	05/27/15	ug/L	75	U	75
L302	Lead, Total	05/03/16	ug/L	25	U	25
L309	Lead, Total	04/26/17	ug/L	25	U	25
L302	Lead, Total	11/08/17	ug/L	63.9		25
LREP	Lead, Total	11/08/17	ug/L	61		25
L302	Lead, Total	04/18/18	ug/L	25	U	25
L309	Lead, Total	10/29/18	ug/L	25	U	25
LREP	Lead, Total	10/29/18	ug/L	25	U	25
L302	Lead, Total	04/23/19	ug/L	25	U	25
L302	Lindane (gamma-BHC)	05/17/10	ug/L	1	U	1
L302	Lindane (gamma-BHC)	05/25/11	ug/L	1	U	1

L302	Lindane (gamma-BHC)	05/22/12	ug/L	1	U	1
L302	Lindane (gamma-BHC)	05/31/13	ug/L	1	U	1
L302	Lindane (gamma-BHC)	05/21/14	ug/L	1	U	1
L302	Lindane (gamma-BHC)	05/27/15	ug/L	1	U	1
L302	Lindane (gamma-BHC)	05/03/16	ug/L	1	U	1
L309	Lindane (gamma-BHC)	04/26/17	ug/L	1	U	1
L302	Lindane (gamma-BHC)	11/08/17	ug/L	1	U	1
LREP	Lindane (gamma-BHC)	11/08/17	ug/L	1	U	1
L302	Lindane (gamma-BHC)	04/18/18	ug/L	1	U	1
L309	Lindane (gamma-BHC)	10/29/18	ug/L	1	U	1
LREP	Lindane (gamma-BHC)	10/29/18	ug/L	1	U	1
L302	Lindane (gamma-BHC)	04/23/19	ug/L	1	U	1
L302	m&p Xylene	05/17/10	ug/L	40	U	40
L302	m&p Xylene	05/25/11	ug/L	20	U	20
L302	m&p Xylene	04/17/12	ug/L	20	U	20
L302	m&p Xylene	05/31/13	ug/L	20	U	20
L302	m&p Xylene	05/21/14	ug/L	20	U	20
L302	m&p Xylene	05/27/15	ug/L	26.6		20
L302	m&p Xylene	05/03/16	ug/L	20	U	20
L309	m&p Xylene	04/26/17	ug/L	23		20
L302	m&p Xylene	11/08/17	ug/L	22.7		20
L309	m&p Xylene	10/29/18	ug/L	49		20
L302	m&p Xylene	04/23/19	ug/L	20		20
L302	Magnesium, Total	05/17/10	ug/L	218000		10000
L302	Magnesium, Total	05/25/11	ug/L	233000		10000
L302	Magnesium, Total	04/17/12	ug/L	217000		10000
L302	Magnesium, Total	05/31/13	ug/L	222000		10000
L302	Magnesium, Total	05/21/14	ug/L	201000		10000
L302	Magnesium, Total	05/27/15	ug/L	210000		10000
L302	Magnesium, Total	05/03/16	ug/L	113000		1000
L309	Magnesium, Total	04/26/17	ug/L	252000		10000
L302	Magnesium, Total	11/08/17	ug/L	282000		10000
L309	Magnesium, Total	10/29/18	ug/L	366000		10000
L302	Magnesium, Total	04/23/19	ug/L	277000		10000
L302	Manganese, Total	05/17/10	ug/L	938		50
L302	Manganese, Total	05/25/11	ug/L	71.9		50
L302	Manganese, Total	04/17/12	ug/L	169		50
L302	Manganese, Total	05/31/13	ug/L	170		50
L302	Manganese, Total	05/21/14	ug/L	685		50
L302	Manganese, Total	05/27/15	ug/L	232		50
L302	Manganese, Total	05/03/16	ug/L	1010		50
L309	Manganese, Total	04/26/17	ug/L	409		50
L302	Manganese, Total	11/08/17	ug/L	589		50
L309	Manganese, Total	10/29/18	ug/L	76		50
L302	Manganese, Total	04/23/19	ug/L	103		50
L302	Mercury, Total	05/17/10	ug/L	4	U	4
L302	Mercury, Total	05/25/11	ug/L	4	U	4
L302	Mercury, Total	04/17/12	ug/L	4	U	4
L302	Mercury, Total	05/31/13	ug/L	4	U	4
L302	Mercury, Total	05/21/14	ug/L	4	U	4
L302	Mercury, Total	05/27/15	ug/L	4	U	4

L302	Mercury, Total	05/03/16	ug/L	4	U	4
L309	Mercury, Total	04/26/17	ug/L	4	U	4
L302	Mercury, Total	11/08/17	ug/L	4	U	4
LREP	Mercury, Total	11/08/17	ug/L	4	U	4
L302	Mercury, Total	04/18/18	ug/L	4.2	U	4.2
L309	Mercury, Total	10/29/18	ug/L	4	U	4
LREP	Mercury, Total	10/29/18	ug/L	4	U	4
L302	Mercury, Total	04/23/19	ug/L	4	U	4
L302	Methoxychlor	05/17/10	ug/L	10	U	10
L302	Methoxychlor	05/25/11	ug/L	10	U	10
L302	Methoxychlor	05/22/12	ug/L	10	U	10
L302	Methoxychlor	05/31/13	ug/L	10	U	10
L302	Methoxychlor	05/21/14	ug/L	10	U	10
L302	Methoxychlor	05/27/15	ug/L	10	U	10
L302	Methoxychlor	05/03/16	ug/L	10	U	10
L309	Methoxychlor	04/26/17	ug/L	10	U	10
L302	Methoxychlor	11/08/17	ug/L	10	U	10
LREP	Methoxychlor	11/08/17	ug/L	10	U	10
L309	Methoxychlor	10/29/18	ug/L	10	U	10
LREP	Methoxychlor	10/29/18	ug/L	10	U	10
L302	Methoxychlor	04/23/19	ug/L	10	U	10
L302	Methyl Ethyl Ketone (2-Butanone)	05/17/10	ug/L	2790		200
L302	Methyl Ethyl Ketone (2-Butanone)	05/25/11	ug/L	279		100
L302	Methyl Ethyl Ketone (2-Butanone)	04/17/12	ug/L	250		100
L302	Methyl Ethyl Ketone (2-Butanone)	05/31/13	ug/L	526		200
L302	Methyl Ethyl Ketone (2-Butanone)	05/21/14	ug/L	1760		200
L302	Methyl Ethyl Ketone (2-Butanone)	05/27/15	ug/L	650		100
L302	Methyl Ethyl Ketone (2-Butanone)	05/03/16	ug/L	686		100
L309	Methyl Ethyl Ketone (2-Butanone)	04/26/17	ug/L	2030		100
L302	Methyl Ethyl Ketone (2-Butanone)	11/08/17	ug/L	883		100
LREP	Methyl Ethyl Ketone (2-Butanone)	11/08/17	ug/L	894		100
L309	Methyl Ethyl Ketone (2-Butanone)	10/29/18	ug/L	100	U	100
LREP	Methyl Ethyl Ketone (2-Butanone)	10/29/18	ug/L	109		100
L302	Methyl Ethyl Ketone (2-Butanone)	04/23/19	ug/L	843		200
L302	Methylene Chloride (Dichloromethane)	05/17/10	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	05/25/11	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	04/17/12	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	05/31/13	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	05/21/14	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	05/27/15	ug/L	50	U	50
L302	Methylene Chloride (Dichloromethane)	05/03/16	ug/L	80.2		50
L309	Methylene Chloride (Dichloromethane)	04/26/17	ug/L	50	U	50
L302	Methylene Chloride (Dichloromethane)	11/08/17	ug/L	50	U	50
L302	Methylene Chloride (Dichloromethane)	04/18/18	ug/L	40	U	40
L309	Methylene Chloride (Dichloromethane)	10/29/18	ug/L	50	U	50
L302	Methylene Chloride (Dichloromethane)	04/23/19	ug/L	50	U	50
L302	Naphthalene	05/17/10	ug/L	100	U	100
L302	Naphthalene	05/25/11	ug/L	100	U	100
L302	Naphthalene	04/17/12	ug/L	100	U	100
L302	Naphthalene	05/31/13	ug/L	100	U	100
L302	Naphthalene	05/21/14	ug/L	100	U	100

L302	Naphthalene	05/27/15	ug/L	100	U	100
L302	Naphthalene	05/03/16	ug/L	100	U	100
L309	Naphthalene	04/26/17	ug/L	100	U	100
L302	Naphthalene	11/08/17	ug/L	100	U	100
L302	Naphthalene	04/18/18	ug/L	100	U	100
L309	Naphthalene	10/29/18	ug/L	100	U	100
L302	Naphthalene	04/23/19	ug/L	100	U	100
L302	n-Butylbenzene	05/17/10	ug/L	40	U	40
L302	n-Butylbenzene	05/25/11	ug/L	20	U	20
L302	n-Butylbenzene	04/17/12	ug/L	20	U	20
L302	n-Butylbenzene	05/31/13	ug/L	20	U	20
L302	n-Butylbenzene	05/21/14	ug/L	20	U	20
L302	n-Butylbenzene	05/27/15	ug/L	50	U	50
L302	n-Butylbenzene	05/03/16	ug/L	50	U	50
L309	n-Butylbenzene	04/26/17	ug/L	50	U	50
L302	n-Butylbenzene	11/08/17	ug/L	50	U	50
L309	n-Butylbenzene	10/29/18	ug/L	50	U	50
L302	n-Butylbenzene	04/23/19	ug/L	23.6	U	23.6
L302	Nickel, Total	05/17/10	ug/L	100	U	100
L302	Nickel, Total	05/25/11	ug/L	113		100
L302	Nickel, Total	04/17/12	ug/L	139		100
L302	Nickel, Total	05/31/13	ug/L	207		100
L302	Nickel, Total	05/21/14	ug/L	186		100
L302	Nickel, Total	05/27/15	ug/L	219		100
L302	Nickel, Total	05/03/16	ug/L	109		100
L309	Nickel, Total	04/26/17	ug/L	213		100
L302	Nickel, Total	11/08/17	ug/L	244		100
L302	Nickel, Total	04/18/18	ug/L	167		100
L309	Nickel, Total	10/29/18	ug/L	283		100
L302	Nickel, Total	04/23/19	ug/L	261		100
L302	Nitrogen-Ammonia, Total	05/17/10	ug/L	335000		5000
L302	Nitrogen-Ammonia, Total	05/25/11	ug/L	460000		5000
L302	Nitrogen-Ammonia, Total	04/17/12	ug/L	810000		5000
L302	Nitrogen-Ammonia, Total	05/31/13	ug/L	1130000		50000
L302	Nitrogen-Ammonia, Total	05/21/14	ug/L	680000		30000
L302	Nitrogen-Ammonia, Total	05/27/15	ug/L	671000		30000
L302	Nitrogen-Ammonia, Total	05/03/16	ug/L	351000		30000
L309	Nitrogen-Ammonia, Total	04/26/17	ug/L	816000		30000
L302	Nitrogen-Ammonia, Total	11/08/17	ug/L	1320000		25000
L309	Nitrogen-Ammonia, Total	10/29/18	ug/L	1680000		50000
L302	Nitrogen-Ammonia, Total	04/23/19	ug/L	1320000		50000
L302	N-Nitrate, Total	05/17/10	ug/L	5000	U	5000
L302	N-Nitrate, Total	05/25/11	ug/L	5000	U	5000
L302	N-Nitrate, Total	04/17/12	ug/L	5000	U	5000
L302	N-Nitrate, Total	05/31/13	ug/L	30000	U	30000
L302	N-Nitrate, Total	05/21/14	ug/L	6000	U	6000
L302	N-Nitrate, Total	05/27/15	ug/L	6000	U	6000
L302	N-Nitrate, Total	05/03/16	ug/L	6000	U	6000
L309	N-Nitrate, Total	04/26/17	ug/L	5000	U	5000
L302	N-Nitrate, Total	11/08/17	ug/L	5000	U	5000
L309	N-Nitrate, Total	10/29/18	ug/L	7500	U	7500

L302	N-Nitrate, Total	04/23/19	ug/L	5000	U	5000
L302	n-Propylbenzene	05/17/10	ug/L	20	U	20
L302	n-Propylbenzene	05/25/11	ug/L	20	U	20
L302	n-Propylbenzene	04/17/12	ug/L	20	U	20
L302	n-Propylbenzene	05/31/13	ug/L	20	U	20
L302	n-Propylbenzene	05/21/14	ug/L	20	U	20
L302	n-Propylbenzene	05/27/15	ug/L	50	U	50
L302	n-Propylbenzene	05/03/16	ug/L	50	U	50
L309	n-Propylbenzene	04/26/17	ug/L	50	U	50
L302	n-Propylbenzene	11/08/17	ug/L	50	U	50
L309	n-Propylbenzene	10/29/18	ug/L	50	U	50
L302	n-Propylbenzene	04/23/19	ug/L	50	U	50
L302	o-Chlorotoluene	05/17/10	ug/L	30	U	30
L302	o-Chlorotoluene	05/25/11	ug/L	20	U	20
L302	o-Chlorotoluene	04/17/12	ug/L	20	U	20
L302	o-Chlorotoluene	05/31/13	ug/L	20	U	20
L302	o-Chlorotoluene	05/21/14	ug/L	10	U	10
L302	o-Chlorotoluene	05/27/15	ug/L	20	U	20
L302	o-Chlorotoluene	05/03/16	ug/L	10	U	10
L309	o-Chlorotoluene	04/26/17	ug/L	10	U	10
L302	o-Chlorotoluene	11/08/17	ug/L	20	U	20
L309	o-Chlorotoluene	10/29/18	ug/L	20	U	20
L302	o-Chlorotoluene	04/23/19	ug/L	50	U	50
L302	Oil (hexane soluble or equivalent)	05/17/10	ug/L	20000	U	20000
L302	Oil (hexane soluble or equivalent)	05/25/11	ug/L	5300		5000
L302	Oil (hexane soluble or equivalent)	04/17/12	ug/L	20000	U	20000
L302	Oil (hexane soluble or equivalent)	05/31/13	ug/L	46700		20000
L302	Oil (hexane soluble or equivalent)	05/21/14	ug/L	21400		20000
L302	Oil (hexane soluble or equivalent)	05/27/15	ug/L	20000	U	20000
L302	Oil (hexane soluble or equivalent)	05/03/16	ug/L	20000	U	20000
L309	Oil (hexane soluble or equivalent)	04/26/17	ug/L	20000	U	20000
L302	Oil (hexane soluble or equivalent)	11/08/17	ug/L	20000	U	20000
L309	Oil (hexane soluble or equivalent)	10/29/18	ug/L	20000	U	20000
L302	Oil (hexane soluble or equivalent)	04/23/19	ug/L	20000	U	20000
L302	o-Xylene	05/17/10	ug/L	20	U	20
L302	o-Xylene	05/25/11	ug/L	20	U	20
L302	o-Xylene	04/17/12	ug/L	20	U	20
L302	o-Xylene	05/31/13	ug/L	20	U	20
L302	o-Xylene	05/21/14	ug/L	20	U	20
L302	o-Xylene	05/27/15	ug/L	20	U	20
L302	o-Xylene	05/03/16	ug/L	10	U	10
L309	o-Xylene	04/26/17	ug/L	10	U	10
L302	o-Xylene	11/08/17	ug/L	20	U	20
L309	o-Xylene	10/29/18	ug/L	20.7		10
L302	o-Xylene	04/23/19	ug/L	20	U	20
L302	Parathion	05/17/10	ug/L	60	U	60
L302	Parathion	05/25/11	ug/L	60	U	60
L302	Parathion	04/17/12	ug/L	300	U	300
L302	Parathion	05/31/13	ug/L	10	U	10
L302	Parathion	05/21/14	ug/L	208	U	208
L302	Parathion	05/27/15	ug/L	10	U	10

L302	Parathion	05/03/16	ug/L	19.6	U	19.6
L309	Parathion	04/26/17	ug/L	10	U	10
L302	Parathion	11/08/17	ug/L	46.7	U	46.7
L309	Parathion	10/29/18	ug/L	10	U	10
L302	Parathion	04/23/19	ug/L	10	U	10
L302	p-Chlorotoluene	05/17/10	ug/L	30	U	30
L302	p-Chlorotoluene	05/25/11	ug/L	20	U	20
L302	p-Chlorotoluene	04/17/12	ug/L	20	U	20
L302	p-Chlorotoluene	05/31/13	ug/L	20	U	20
L302	p-Chlorotoluene	05/21/14	ug/L	20	U	20
L302	p-Chlorotoluene	05/27/15	ug/L	50	U	50
L302	p-Chlorotoluene	05/03/16	ug/L	50	U	50
L309	p-Chlorotoluene	04/26/17	ug/L	50	U	50
L302	p-Chlorotoluene	11/08/17	ug/L	50	U	50
L309	p-Chlorotoluene	10/29/18	ug/L	50	U	50
L302	p-Chlorotoluene	04/23/19	ug/L	25.2	U	25.2
L302	Pentachlorophenol	05/17/10	ug/L	500	U	500
L302	Pentachlorophenol	05/25/11	ug/L	500	U	500
L302	Pentachlorophenol	04/17/12	ug/L	1000	U	1000
L302	Pentachlorophenol	05/31/13	ug/L	500	U	500
L302	Pentachlorophenol	05/21/14	ug/L	500	U	500
L302	Pentachlorophenol	05/27/15	ug/L	500	U	500
L302	Pentachlorophenol	05/03/16	ug/L	500	U	500
L309	Pentachlorophenol	04/26/17	ug/L	500	U	500
L302	Pentachlorophenol	11/08/17	ug/L	500	U	500
LREP	Pentachlorophenol	11/08/17	ug/L	500	U	500
L302	Pentachlorophenol	04/18/18	ug/L	500	U	500
L309	Pentachlorophenol	10/29/18	ug/L	500	U	500
LREP	Pentachlorophenol	10/29/18	ug/L	500	U	500
L302	Pentachlorophenol	04/23/19	ug/L	500	U	500
L302	Phenols, Total	05/17/10	ug/L	481		100
L302	Phenols, Total	05/25/11	ug/L	100	U	100
L302	Phenols, Total	04/17/12	ug/L	1350		100
L302	Phenols, Total	05/31/13	ug/L	2650		250
L302	Phenols, Total	05/21/14	ug/L	3900		2000
L302	Phenols, Total	05/27/15	ug/L	2500	U	2500
L302	Phenols, Total	05/03/16	ug/L	151		100
L309	Phenols, Total	04/26/17	ug/L	767		200
L302	Phenols, Total	11/08/17	ug/L	100	U	100
L302	Phenols, Total	04/18/18	ug/L	2270		200
L309	Phenols, Total	10/29/18	ug/L	283		100
L302	Phenols, Total	04/23/19	ug/L	465		100
L302	Phosphorus, Total	02/16/10	ug P/L	2300		500
L302	Phosphorus, Total	05/17/10	ug P/L	1850		500
L302	Phosphorus, Total	08/19/10	ug P/L	3760		500
L302	Phosphorus, Total	10/27/10	ug P/L	4680		500
L302	Phosphorus, Total	02/23/11	ug P/L	1850		500
L302	Phosphorus, Total	05/25/11	ug P/L	1910		500
L302	Phosphorus, Total	08/23/11	ug P/L	2960		500
L302	Phosphorus, Total	11/08/11	ug P/L	4110		500
L302	Phosphorus, Total	02/08/12	ug P/L	5350		1000

L302	Phosphorus, Total	04/17/12	ug P/L	6300		1000
L302	Phosphorus, Total	07/31/12	ug P/L	7700		800
L302	Phosphorus, Total	11/28/12	ug P/L	7200		800
L302	Phosphorus, Total	02/28/13	ug P/L	5900		800
L302	Phosphorus, Total	05/31/13	ug P/L	43300		4000
L302	Phosphorus, Total	08/15/13	ug P/L	10600		800
L302	Phosphorus, Total	11/14/13	ug P/L	5300		1600
L302	Phosphorus, Total	02/18/14	ug P/L	10600		800
L302	Phosphorus, Total	05/21/14	ug P/L	6400		800
L302	Phosphorus, Total	08/13/14	ug P/L	8200		8000
L302	Phosphorus, Total	11/25/14	ug P/L	9700		800
L302	Phosphorus, Total	02/19/15	ug P/L	5400		800
L302	Phosphorus, Total	05/27/15	ug P/L	6870		800
L302	Phosphorus, Total	08/18/15	ug P/L	7800		800
L302	Phosphorus, Total	11/05/15	ug P/L	9100		500
L302	Phosphorus, Total	02/04/16	ug P/L	4400		800
L302	Phosphorus, Total	05/03/16	ug P/L	500000	U	500000
L302	Phosphorus, Total	08/09/16	ug P/L	8000		800
L302	Phosphorus, Total	11/14/16	ug P/L	3400		1600
L302	Phosphorus, Total	02/21/17	ug P/L	10400		1600
L309	Phosphorus, Total	04/26/17	ug P/L	8210		1600
L302	Phosphorus, Total	05/24/17	ug P/L	8600		210
L302	Phosphorus, Total	07/31/17	ug P/L	2800		800
L302	Phosphorus, Total	11/08/17	ug P/L	9400		500
L302	Phosphorus, Total	02/19/18	ug P/L	5700		1600
L302	Phosphorus, Total	04/18/18	ug P/L	7100		1600
L302	Phosphorus, Total	08/09/18	ug P/L	9000		16000
L309	Phosphorus, Total	10/29/18	ug P/L	8800		800
L302	Phosphorus, Total	04/23/19	ug P/L	7900		800
L302	p-Isopropyltoluene	05/17/10	ug/L	40	U	40
L302	p-Isopropyltoluene	05/25/11	ug/L	20	U	20
L302	p-Isopropyltoluene	04/17/12	ug/L	20	U	20
L302	p-Isopropyltoluene	05/31/13	ug/L	20	U	20
L302	p-Isopropyltoluene	05/21/14	ug/L	20	U	20
L302	p-Isopropyltoluene	05/27/15	ug/L	50	U	50
L302	p-Isopropyltoluene	05/03/16	ug/L	50	U	50
L309	p-Isopropyltoluene	04/26/17	ug/L	50	U	50
L302	p-Isopropyltoluene	11/08/17	ug/L	50	U	50
L309	p-Isopropyltoluene	10/29/18	ug/L	50	U	50
L302	p-Isopropyltoluene	04/23/19	ug/L	26.7	U	26.7
L302	Polychlorinated Biphenyls (PCBs)	05/17/10	ug/L	1	U	1
L302	Polychlorinated Biphenyls (PCBs)	05/25/11	ug/L	1	U	1
L302	Polychlorinated Biphenyls (PCBs)	05/22/12	ug/L	1	U	1
L302	Polychlorinated Biphenyls (PCBs)	05/31/13	ug/L	5	U	5
L302	Polychlorinated Biphenyls (PCBs)	05/21/14	ug/L	5	U	5
L302	Polychlorinated Biphenyls (PCBs)	05/27/15	ug/L	1	U	1
L302	Polychlorinated Biphenyls (PCBs)	05/03/16	ug/L	1	U	1
L309	Polychlorinated Biphenyls (PCBs)	04/26/17	ug/L	5	U	5
L302	Polychlorinated Biphenyls (PCBs)	11/08/17	ug/L	5	U	5
L309	Polychlorinated Biphenyls (PCBs)	10/29/18	ug/L	2.5	U	2.5
L302	Polychlorinated Biphenyls (PCBs)	04/23/19	ug/L	5	U	5

L302	Potassium, Total	05/17/10	ug/L	220000		10000
L302	Potassium, Total	05/25/11	ug/L	301000		10000
L302	Potassium, Total	04/17/12	ug/L	425000		10000
L302	Potassium, Total	05/31/13	ug/L	597000		100000
L302	Potassium, Total	05/21/14	ug/L	507000		100000
L302	Potassium, Total	05/27/15	ug/L	510000		20000
L302	Potassium, Total	05/03/16	ug/L	236000		100000
L309	Potassium, Total	04/26/17	ug/L	595000		100000
L302	Potassium, Total	11/08/17	ug/L	644000		20000
L309	Potassium, Total	10/29/18	ug/L	936000		50000
L302	Potassium, Total	04/23/19	ug/L	855000		118000
L302	sec-Butylbenzene	05/17/10	ug/L	30	U	30
L302	sec-Butylbenzene	05/25/11	ug/L	20	U	20
L302	sec-Butylbenzene	04/17/12	ug/L	20	U	20
L302	sec-Butylbenzene	05/31/13	ug/L	50	U	50
L302	sec-Butylbenzene	05/21/14	ug/L	50	U	50
L302	sec-Butylbenzene	05/27/15	ug/L	50	U	50
L302	sec-Butylbenzene	05/03/16	ug/L	50	U	50
L309	sec-Butylbenzene	04/26/17	ug/L	50	U	50
L302	sec-Butylbenzene	11/08/17	ug/L	50	U	50
L309	sec-Butylbenzene	10/29/18	ug/L	50	U	50
L302	sec-Butylbenzene	04/23/19	ug/L	50	U	50
L302	Selenium, Total	05/17/10	ug/L	50	U	50
L302	Selenium, Total	05/25/11	ug/L	50	U	50
L302	Selenium, Total	04/17/12	ug/L	50	U	50
L302	Selenium, Total	05/31/13	ug/L	50	U	50
L302	Selenium, Total	05/21/14	ug/L	50	U	50
L302	Selenium, Total	05/27/15	ug/L	200	U	200
L302	Selenium, Total	05/03/16	ug/L	50	U	50
L309	Selenium, Total	04/26/17	ug/L	50	U	50
L302	Selenium, Total	11/08/17	ug/L	50	U	50
LREP	Selenium, Total	11/08/17	ug/L	50	U	50
L302	Selenium, Total	04/18/18	ug/L	50	U	50
L309	Selenium, Total	10/29/18	ug/L	50	U	50
LREP	Selenium, Total	10/29/18	ug/L	50	U	50
L302	Selenium, Total	04/23/19	ug/L	50	U	50
L302	Silver, Total	05/17/10	ug/L	50	U	50
L302	Silver, Total	05/25/11	ug/L	50	U	50
L302	Silver, Total	04/17/12	ug/L	50	U	50
L302	Silver, Total	05/31/13	ug/L	50	U	50
L302	Silver, Total	05/21/14	ug/L	50	U	50
L302	Silver, Total	05/27/15	ug/L	100	U	100
L302	Silver, Total	05/03/16	ug/L	50	U	50
L309	Silver, Total	04/26/17	ug/L	50	U	50
L302	Silver, Total	11/08/17	ug/L	50	U	50
LREP	Silver, Total	11/08/17	ug/L	50	U	50
L302	Silver, Total	04/18/18	ug/L	50	U	50
L309	Silver, Total	10/29/18	ug/L	50	U	50
LREP	Silver, Total	10/29/18	ug/L	50	U	50
L302	Silver, Total	04/23/19	ug/L	50	U	50
L302	Sodium, Total	05/17/10	ug/L	668000		10000

L302	Sodium, Total	05/25/11	ug/L	912000		10000
L302	Sodium, Total	04/17/12	ug/L	1360000		10000
L302	Sodium, Total	05/31/13	ug/L	1940000		100000
L302	Sodium, Total	05/21/14	ug/L	1590000		100000
L302	Sodium, Total	05/27/15	ug/L	1570000		10000
L302	Sodium, Total	05/03/16	ug/L	800000		100000
L309	Sodium, Total	04/26/17	ug/L	1790000		50000
L302	Sodium, Total	11/08/17	ug/L	2020000		10000
L309	Sodium, Total	10/29/18	ug/L	2500000		50000
L302	Sodium, Total	04/23/19	ug/L	2400000		153000
L302	Styrene	05/17/10	ug/L	20	U	20
L302	Styrene	05/25/11	ug/L	20	U	20
L302	Styrene	04/17/12	ug/L	20	U	20
L302	Styrene	05/31/13	ug/L	20	U	20
L302	Styrene	05/21/14	ug/L	20	U	20
L302	Styrene	05/27/15	ug/L	100	U	100
L302	Styrene	05/03/16	ug/L	100	U	100
L309	Styrene	04/26/17	ug/L	100	U	100
L302	Styrene	11/08/17	ug/L	100	U	100
L309	Styrene	10/29/18	ug/L	100	U	100
L302	Styrene	04/23/19	ug/L	20	U	20
L302	Sulfate, Total	05/17/10	ug/L	57000		50000
L302	Sulfate, Total	05/25/11	ug/L	108000		50000
L302	Sulfate, Total	04/17/12	ug/L	128000		50000
L302	Sulfate, Total	05/31/13	ug/L	400000	U	400000
L302	Sulfate, Total	05/21/14	ug/L	346000		80000
L302	Sulfate, Total	05/27/15	ug/L	99900		80000
L302	Sulfate, Total	05/03/16	ug/L	124000		80000
L309	Sulfate, Total	04/26/17	ug/L	60000	U	60000
L302	Sulfate, Total	11/08/17	ug/L	58000		20000
L309	Sulfate, Total	10/29/18	ug/L	50000	U	50000
L302	Sulfate, Total	04/23/19	ug/L	60000	U	60000
L302	tert-Butylbenzene	05/17/10	ug/L	30	U	30
L302	tert-Butylbenzene	05/25/11	ug/L	20	U	20
L302	tert-Butylbenzene	04/17/12	ug/L	20	U	20
L302	tert-Butylbenzene	05/31/13	ug/L	20	U	20
L302	tert-Butylbenzene	05/21/14	ug/L	20	U	20
L302	tert-Butylbenzene	05/27/15	ug/L	50	U	50
L302	tert-Butylbenzene	05/03/16	ug/L	50	U	50
L309	tert-Butylbenzene	04/26/17	ug/L	50	U	50
L302	tert-Butylbenzene	11/08/17	ug/L	50	U	50
L309	tert-Butylbenzene	10/29/18	ug/L	50	U	50
L302	tert-Butylbenzene	04/23/19	ug/L	20	U	20
L302	Tetrachloroethene	05/17/10	ug/L	30	U	30
L302	Tetrachloroethene	05/25/11	ug/L	20	U	20
L302	Tetrachloroethene	04/17/12	ug/L	20	U	20
L302	Tetrachloroethene	05/31/13	ug/L	20	U	20
L302	Tetrachloroethene	05/21/14	ug/L	20	U	20
L302	Tetrachloroethene	05/27/15	ug/L	50	U	50
L302	Tetrachloroethene	05/03/16	ug/L	50	U	50
L309	Tetrachloroethene	04/26/17	ug/L	50	U	50

L302	Tetrachloroethene	11/08/17	ug/L	50	U	50
LREP	Tetrachloroethene	11/08/17	ug/L	50	U	50
L302	Tetrachloroethene	04/18/18	ug/L	20	U	20
L309	Tetrachloroethene	10/29/18	ug/L	50	U	50
LREP	Tetrachloroethene	10/29/18	ug/L	50	U	50
L302	Tetrachloroethene	04/23/19	ug/L	20	U	20
L302	Tetrahydrofuran	05/17/10	ug/L	810		200
L302	Tetrahydrofuran	05/25/11	ug/L	562		20
L302	Tetrahydrofuran	04/17/12	ug/L	523		20
L302	Tetrahydrofuran	05/31/13	ug/L	403		50
L302	Tetrahydrofuran	05/21/14	ug/L	409		50
L302	Tetrahydrofuran	05/27/15	ug/L	723		200
L302	Tetrahydrofuran	05/03/16	ug/L	336		200
L309	Tetrahydrofuran	04/26/17	ug/L	1070		200
L302	Tetrahydrofuran	11/08/17	ug/L	1150		200
L309	Tetrahydrofuran	10/29/18	ug/L	1160		200
L302	Tetrahydrofuran	04/23/19	ug/L	821		200
L302	Thallium, Total	05/17/10	ug/L	50	U	50
L302	Thallium, Total	05/25/11	ug/L	50	U	50
L302	Thallium, Total	04/17/12	ug/L	50	U	50
L302	Thallium, Total	05/31/13	ug/L	50	U	50
L302	Thallium, Total	05/21/14	ug/L	50	U	50
L302	Thallium, Total	05/27/15	ug/L	400	U	400
L302	Thallium, Total	05/03/16	ug/L	50	U	50
L309	Thallium, Total	04/26/17	ug/L	50	U	50
L302	Thallium, Total	11/08/17	ug/L	50	U	50
L302	Thallium, Total	04/18/18	ug/L	50	U	50
L309	Thallium, Total	10/29/18	ug/L	50	U	50
L302	Thallium, Total	04/23/19	ug/L	50	U	50
L302	Toluene	05/17/10	ug/L	164		40
L302	Toluene	05/25/11	ug/L	20	U	20
L302	Toluene	04/17/12	ug/L	20	U	20
L302	Toluene	05/31/13	ug/L	20	U	20
L302	Toluene	05/21/14	ug/L	24.9		20
L302	Toluene	05/27/15	ug/L	72.6		50
L302	Toluene	05/03/16	ug/L	50	U	50
L309	Toluene	04/26/17	ug/L	130		50
L302	Toluene	11/08/17	ug/L	50	U	50
L302	Toluene	04/18/18	ug/L	42.9		20
L309	Toluene	10/29/18	ug/L	50	U	50
L302	Toluene	04/23/19	ug/L	20	U	20
L302	Toxaphene	05/17/10	ug/L	10	U	10
L302	Toxaphene	05/25/11	ug/L	10	U	10
L302	Toxaphene	05/22/12	ug/L	10	U	10
L302	Toxaphene	05/31/13	ug/L	50	U	50
L302	Toxaphene	05/21/14	ug/L	10	U	10
L302	Toxaphene	05/27/15	ug/L	10	U	10
L302	Toxaphene	05/03/16	ug/L	10	U	10
L309	Toxaphene	04/26/17	ug/L	10	U	10
L302	Toxaphene	11/08/17	ug/L	10	U	10
LREP	Toxaphene	11/08/17	ug/L	10	U	10

L302	Toxaphene	04/18/18	ug/L	30	U	30
L309	Toxaphene	10/29/18	ug/L	27.9	U	27.9
LREP	Toxaphene	10/29/18	ug/L	27.9	U	27.9
L302	Toxaphene	04/23/19	ug/L	10	U	10
L302	trans-1,2-Dichloroethene	05/17/10	ug/L	50	U	50
L302	trans-1,2-Dichloroethene	05/25/11	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	04/17/12	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	05/31/13	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	05/21/14	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	05/27/15	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	05/03/16	ug/L	10	U	10
L309	trans-1,2-Dichloroethene	04/26/17	ug/L	10	U	10
L302	trans-1,2-Dichloroethene	11/08/17	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	04/18/18	ug/L	20	U	20
L309	trans-1,2-Dichloroethene	10/29/18	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	04/23/19	ug/L	36.4	U	36.4
L302	trans-1,3-Dichloropropene	05/17/10	ug/L	40	U	40
L302	trans-1,3-Dichloropropene	05/25/11	ug/L	20	U	20
L302	trans-1,3-Dichloropropene	04/17/12	ug/L	20	U	20
L302	trans-1,3-Dichloropropene	05/31/13	ug/L	20	U	20
L302	trans-1,3-Dichloropropene	05/21/14	ug/L	20	U	20
L302	trans-1,3-Dichloropropene	05/27/15	ug/L	100	U	100
L302	trans-1,3-Dichloropropene	05/03/16	ug/L	100	U	100
L309	trans-1,3-Dichloropropene	04/26/17	ug/L	100	U	100
L302	trans-1,3-Dichloropropene	11/08/17	ug/L	100	U	100
L309	trans-1,3-Dichloropropene	10/29/18	ug/L	100	U	100
L302	trans-1,3-Dichloropropene	04/23/19	ug/L	146	U	146
L302	Trichloroethene	05/17/10	ug/L	40	U	40
L302	Trichloroethene	05/25/11	ug/L	20	U	20
L302	Trichloroethene	04/17/12	ug/L	20	U	20
L302	Trichloroethene	05/31/13	ug/L	20	U	20
L302	Trichloroethene	05/21/14	ug/L	20	U	20
L302	Trichloroethene	05/27/15	ug/L	50	U	50
L302	Trichloroethene	05/03/16	ug/L	50	U	50
L309	Trichloroethene	04/26/17	ug/L	50	U	50
L302	Trichloroethene	11/08/17	ug/L	50	U	50
LREP	Trichloroethene	11/08/17	ug/L	50	U	50
L302	Trichloroethene	04/18/18	ug/L	20	U	20
L309	Trichloroethene	10/29/18	ug/L	50	U	50
LREP	Trichloroethene	10/29/18	ug/L	50	U	50
L302	Trichloroethene	04/23/19	ug/L	20	U	20
L302	Trichlorofluoromethane	05/17/10	ug/L	30	U	30
L302	Trichlorofluoromethane	05/25/11	ug/L	20	U	20
L302	Trichlorofluoromethane	04/17/12	ug/L	20	U	20
L302	Trichlorofluoromethane	05/31/13	ug/L	20	U	20
L302	Trichlorofluoromethane	05/21/14	ug/L	20	U	20
L302	Trichlorofluoromethane	05/27/15	ug/L	50	U	50
L302	Trichlorofluoromethane	05/03/16	ug/L	50	U	50
L309	Trichlorofluoromethane	04/26/17	ug/L	50	U	50
L302	Trichlorofluoromethane	11/08/17	ug/L	50	U	50
L309	Trichlorofluoromethane	10/29/18	ug/L	50	U	50

L302	Trichlorofluoromethane	04/23/19	ug/L	20	U	20
L302	Vinyl Acetate	05/17/10	ug/L	100	U	100
L302	Vinyl Acetate	05/25/11	ug/L	50	U	50
L302	Vinyl Acetate	04/17/12	ug/L	50	U	50
L302	Vinyl Acetate	05/31/13	ug/L	200	U	200
L302	Vinyl Acetate	05/21/14	ug/L	50	U	50
L302	Vinyl Acetate	05/27/15	ug/L	200	U	200
L302	Vinyl Acetate	05/03/16	ug/L	200	U	200
L309	Vinyl Acetate	04/26/17	ug/L	200	U	200
L302	Vinyl Acetate	11/08/17	ug/L	100	U	100
L309	Vinyl Acetate	10/29/18	ug/L	100	U	100
L302	Vinyl Acetate	04/23/19	ug/L	200	U	200
L302	Vinyl Chloride	05/17/10	ug/L	20	U	20
L302	Vinyl Chloride	05/25/11	ug/L	20	U	20
L302	Vinyl Chloride	04/17/12	ug/L	20	U	20
L302	Vinyl Chloride	05/31/13	ug/L	20	U	20
L302	Vinyl Chloride	05/21/14	ug/L	20	U	20
L302	Vinyl Chloride	05/27/15	ug/L	20	U	20
L302	Vinyl Chloride	05/03/16	ug/L	20	U	20
L309	Vinyl Chloride	04/26/17	ug/L	20	U	20
L302	Vinyl Chloride	11/08/17	ug/L	20	U	20
LREP	Vinyl Chloride	11/08/17	ug/L	20	U	20
L302	Vinyl Chloride	04/18/18	ug/L	20	U	20
L309	Vinyl Chloride	10/29/18	ug/L	20	U	20
LREP	Vinyl Chloride	10/29/18	ug/L	20	U	20
L302	Vinyl Chloride	04/23/19	ug/L	20	U	20
L302	Xylenes, Total	05/17/10	ug/L	100	U	100
L302	Xylenes, Total	05/25/11	ug/L	20	U	20
L302	Xylenes, Total	04/17/12	ug/L	21		20
L302	Xylenes, Total	05/31/13	ug/L	30	U	30
L302	Xylenes, Total	05/21/14	ug/L	30	U	30
L302	Xylenes, Total	05/27/15	ug/L	100	U	100
L302	Xylenes, Total	05/03/16	ug/L	100	U	100
L309	Xylenes, Total	04/26/17	ug/L	100	U	100
L302	Xylenes, Total	11/08/17	ug/L	100	U	100
L309	Xylenes, Total	10/29/18	ug/L	100	U	100
LREP	Xylenes, Total	10/29/18	ug/L	100	U	100
L302	Xylenes, Total	04/23/19	ug/L	30	U	30
L302	Zinc, Total	05/17/10	ug/L	273		20
L302	Zinc, Total	05/25/11	ug/L	69.6		20
L302	Zinc, Total	04/17/12	ug/L	91.1		20
L302	Zinc, Total	05/31/13	ug/L	107		40
L302	Zinc, Total	05/21/14	ug/L	130		40
L302	Zinc, Total	05/27/15	ug/L	400	U	400
L302	Zinc, Total	05/03/16	ug/L	40	U	40
L309	Zinc, Total	04/26/17	ug/L	78.5		40
L302	Zinc, Total	11/08/17	ug/L	399		40
L302	Zinc, Total	04/18/18	ug/L	166		76.6
L309	Zinc, Total	10/29/18	ug/L	274		20
L302	Zinc, Total	04/23/19	ug/L	116		40

Summary of Leachate Analytical Data
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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	1,1,1,2-Tetrachloroethane	11/15/19	ug/L	20	U	20
L301	1,1,1,2-Tetrachloroethane	10/25/21	ug/L	20	U	20
L302	1,1,1,2-Tetrachloroethane	11/11/20	ug/L	20	U	20
L309	1,1,1,2-Tetrachloroethane	05/11/20	ug/L	20	U	20
L310	1,1,1,2-Tetrachloroethane	04/28/21	ug/L	20	U	20
L301	1,1,1-Trichloroethane	11/15/19	ug/L	20	U	20
L301	1,1,1-Trichloroethane	10/25/21	ug/L	20	U	20
L302	1,1,1-Trichloroethane	11/11/20	ug/L	20	U	20
L309	1,1,1-Trichloroethane	05/11/20	ug/L	20	U	20
L310	1,1,1-Trichloroethane	04/28/21	ug/L	20	U	20
L301	1,1,2,2-Tetrachloroethane	11/15/19	ug/L	20	U	20
L301	1,1,2,2-Tetrachloroethane	10/25/21	ug/L	20	U	20
L302	1,1,2,2-Tetrachloroethane	11/11/20	ug/L	20	U	20
L309	1,1,2,2-Tetrachloroethane	05/11/20	ug/L	20	U	20
L310	1,1,2,2-Tetrachloroethane	04/28/21	ug/L	20	U	20
L301	1,1,2-Trichloroethane	11/15/19	ug/L	20	U	20
L301	1,1,2-Trichloroethane	10/25/21	ug/L	20	U	20
L302	1,1,2-Trichloroethane	11/11/20	ug/L	20	U	20
L309	1,1,2-Trichloroethane	05/11/20	ug/L	20	U	20
L310	1,1,2-Trichloroethane	04/28/21	ug/L	20	U	20
L301	1,1-Dichloroethane	11/15/19	ug/L	20	U	20
L301	1,1-Dichloroethane	10/25/21	ug/L	20	U	20
L302	1,1-Dichloroethane	11/11/20	ug/L	20	U	20
L309	1,1-Dichloroethane	05/11/20	ug/L	20	U	20
L310	1,1-Dichloroethane	04/28/21	ug/L	20	U	20
L301	1,1-Dichloroethene	11/15/19	ug/L	20	U	20
L301	1,1-Dichloroethene	10/25/21	ug/L	20	U	20
L302	1,1-Dichloroethene	11/11/20	ug/L	20	U	20
L309	1,1-Dichloroethene	05/11/20	ug/L	20	U	20
L310	1,1-Dichloroethene	04/28/21	ug/L	20	U	20
LREP	1,1-Dichloroethene	11/11/20	ug/L	20	U	20
L301	1,1-Dichloropropene	11/15/19	ug/L	20	U	20
L301	1,1-Dichloropropene	10/25/21	ug/L	20	U	20
L302	1,1-Dichloropropene	11/11/20	ug/L	20	U	20
L309	1,1-Dichloropropene	05/11/20	ug/L	20	U	20
L310	1,1-Dichloropropene	04/28/21	ug/L	20	U	20
L301	1,2,3-Trichlorobenzene	11/15/19	ug/L	50	U	50
L301	1,2,3-Trichlorobenzene	10/25/21	ug/L	50	U	50
L302	1,2,3-Trichlorobenzene	11/11/20	ug/L	50	U	50
L309	1,2,3-Trichlorobenzene	05/11/20	ug/L	50	U	50
L310	1,2,3-Trichlorobenzene	04/28/21	ug/L	50	U	50
L301	1,2,3-Trichloropropane	11/15/19	ug/L	50	U	50
L301	1,2,3-Trichloropropane	10/25/21	ug/L	50	U	50
L302	1,2,3-Trichloropropane	11/11/20	ug/L	50	U	50
L309	1,2,3-Trichloropropane	05/11/20	ug/L	50	U	50
L310	1,2,3-Trichloropropane	04/28/21	ug/L	50	U	50
L301	1,2,4-Trichlorobenzene	11/15/19	ug/L	50	U	50
L301	1,2,4-Trichlorobenzene	10/25/21	ug/L	50	U	50

Summary of Leachate Analytical Data
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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L302	1,2,4-Trichlorobenzene	11/11/20	ug/L	217	U	217
L309	1,2,4-Trichlorobenzene	05/11/20	ug/L	50	U	50
L310	1,2,4-Trichlorobenzene	04/28/21	ug/L	50	U	50
L301	1,2,4-Trimethylbenzene	11/15/19	ug/L	50	U	50
L301	1,2,4-Trimethylbenzene	10/25/21	ug/L	50	U	50
L302	1,2,4-Trimethylbenzene	11/11/20	ug/L	50	U	50
L309	1,2,4-Trimethylbenzene	05/11/20	ug/L	50	U	50
L310	1,2,4-Trimethylbenzene	04/28/21	ug/L	50	U	50
L301	1,2-Dibromo-3-Chloropropane (DBCP)	11/15/19	ug/L	30	U	30
L301	1,2-Dibromo-3-Chloropropane (DBCP)	10/25/21	ug/L	30	U	30
L302	1,2-Dibromo-3-Chloropropane (DBCP)	11/11/20	ug/L	20	U	20
L309	1,2-Dibromo-3-Chloropropane (DBCP)	05/11/20	ug/L	30	U	30
L310	1,2-Dibromo-3-Chloropropane (DBCP)	04/28/21	ug/L	30	U	30
L301	1,2-Dichlorobenzene	11/15/19	ug/L	50	U	50
L301	1,2-Dichlorobenzene	10/25/21	ug/L	50	U	50
L302	1,2-Dichlorobenzene	11/11/20	ug/L	50	U	50
L309	1,2-Dichlorobenzene	05/11/20	ug/L	50	U	50
L310	1,2-Dichlorobenzene	04/28/21	ug/L	50	U	50
L301	1,2-Dichloroethane	11/15/19	ug/L	10	U	10
L301	1,2-Dichloroethane	10/25/21	ug/L	10	U	10
L302	1,2-Dichloroethane	11/11/20	ug/L	22.7		10
L309	1,2-Dichloroethane	05/11/20	ug/L	10	U	10
L310	1,2-Dichloroethane	04/28/21	ug/L	10	U	10
LREP	1,2-Dichloroethane	11/11/20	ug/L	21.6		10
L301	1,2-Dichloropropane	11/15/19	ug/L	10	U	10
L301	1,2-Dichloropropane	10/25/21	ug/L	10	U	10
L302	1,2-Dichloropropane	11/11/20	ug/L	10	U	10
L309	1,2-Dichloropropane	05/11/20	ug/L	10	U	10
L310	1,2-Dichloropropane	04/28/21	ug/L	10	U	10
L301	1,3,5-Trimethylbenzene	11/15/19	ug/L	15	U	15
L301	1,3,5-Trimethylbenzene	10/25/21	ug/L	15	U	15
L302	1,3,5-Trimethylbenzene	11/11/20	ug/L	15	U	15
L309	1,3,5-Trimethylbenzene	05/11/20	ug/L	15	U	15
L310	1,3,5-Trimethylbenzene	04/28/21	ug/L	15	U	15
L301	1,3-Dichlorobenzene	11/15/19	ug/L	15	U	15
L301	1,3-Dichlorobenzene	10/25/21	ug/L	15	U	15
L302	1,3-Dichlorobenzene	11/11/20	ug/L	15	U	15
L309	1,3-Dichlorobenzene	05/11/20	ug/L	15	U	15
L310	1,3-Dichlorobenzene	04/28/21	ug/L	15	U	15
L301	1,3-Dichloropropane	11/15/19	ug/L	20	U	20
L301	1,3-Dichloropropane	10/25/21	ug/L	20	U	20
L302	1,3-Dichloropropane	11/11/20	ug/L	20	U	20
L309	1,3-Dichloropropane	05/11/20	ug/L	20	U	20
L310	1,3-Dichloropropane	04/28/21	ug/L	20	U	20
L301	1,3-Dichloropropene	11/15/19	ug/L	20	U	20
L301	1,3-Dichloropropene	10/25/21	ug/L	20	U	20
L302	1,3-Dichloropropene	11/11/20	ug/L	20	U	20
L309	1,3-Dichloropropene	05/11/20	ug/L	20	U	20
L310	1,3-Dichloropropene	04/28/21	ug/L	38.2	U	38.2
L301	1,4-Dichloro-2-Butene	11/15/19	ug/L	20	U	20

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	1,4-Dichloro-2-Butene	10/25/21	ug/L	20	U	20
L301	1,4-Dichlorobenzene	11/15/19	ug/L	75	U	75
L301	1,4-Dichlorobenzene	10/25/21	ug/L	75	U	75
L302	1,4-Dichlorobenzene	11/11/20	ug/L	75	U	75
L309	1,4-Dichlorobenzene	05/11/20	ug/L	75	U	75
L310	1,4-Dichlorobenzene	04/28/21	ug/L	75	U	75
LREP	1,4-Dichlorobenzene	11/11/20	ug/L	75	U	75
L301	1-Propanol	11/15/19	ug/L	2,500	U	2,500
L301	1-Propanol	10/25/21	ug/L	2,500	U	2,500
L302	1-Propanol	11/11/20	ug/L	5,320	U	5,320
L309	1-Propanol	05/11/20	ug/L	5,320	U	5,320
L310	1-Propanol	04/28/21	ug/L	2,500	U	2,500
L301	2,2-Dichloropropane	11/15/19	ug/L	50	U	50
L301	2,2-Dichloropropane	10/25/21	ug/L	50	U	50
L302	2,2-Dichloropropane	11/11/20	ug/L	50	U	50
L309	2,2-Dichloropropane	05/11/20	ug/L	50	U	50
L310	2,2-Dichloropropane	04/28/21	ug/L	50	U	50
L301	2,4,5-tp (Sylvex)	11/15/19	ug/L	20	U	20
L301	2,4,5-tp (Sylvex)	10/25/21	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	11/11/20	ug/L	20	U	20
L302	2,4,5-tp (Sylvex)	11/11/20	ug/L	20	U	20
L309	2,4,5-tp (Sylvex)	05/11/20	ug/L	20	U	20
L310	2,4,5-tp (Sylvex)	04/28/21	ug/L	20	U	20
LREP	2,4,5-tp (Sylvex)	11/11/20	ug/L	20	U	20
LREP	2,4,5-tp (Sylvex)	11/11/20	ug/L	20	U	20
L301	2,4,5-Trichlorophenol	11/15/19	ug/L	500	U	500
L301	2,4,5-Trichlorophenol	10/25/21	ug/L	500	U	500
L302	2,4,5-Trichlorophenol	11/11/20	ug/L	500	U	500
LREP	2,4,5-Trichlorophenol	11/11/20	ug/L	500	U	500
L301	2,4,6-Trichlorophenol	11/15/19	ug/L	500	U	500
L301	2,4,6-Trichlorophenol	10/25/21	ug/L	500	U	500
L302	2,4,6-Trichlorophenol	11/11/20	ug/L	500	U	500
L309	2,4,6-Trichlorophenol	05/11/20	ug/L	500	U	500
L310	2,4,6-Trichlorophenol	04/28/21	ug/L	500	U	500
LREP	2,4,6-Trichlorophenol	11/11/20	ug/L	500	U	500
L301	2,4-Dichlorophenol	11/15/19	ug/L	500	U	500
L301	2,4-Dichlorophenol	10/25/21	ug/L	500	U	500
L302	2,4-Dichlorophenol	11/11/20	ug/L	500	U	500
L309	2,4-Dichlorophenol	05/11/20	ug/L	500	U	500
L310	2,4-Dichlorophenol	04/28/21	ug/L	500	U	500
L301	2,4-Dichlorophenoxyacetic Acid	11/15/19	ug/L	20	U	20
L301	2,4-Dichlorophenoxyacetic Acid	10/25/21	ug/L	20	U	20
L302	2,4-Dichlorophenoxyacetic Acid	11/11/20	ug/L	20	U	20
L309	2,4-Dichlorophenoxyacetic Acid	05/11/20	ug/L	20	U	20
L310	2,4-Dichlorophenoxyacetic Acid	04/28/21	ug/L	20	U	20
LREP	2,4-Dichlorophenoxyacetic Acid	11/11/20	ug/L	20	U	20
L301	2,4-Dimethylphenol	11/15/19	ug/L	500	U	500
L301	2,4-Dimethylphenol	10/25/21	ug/L	500	U	500
L302	2,4-Dimethylphenol	11/11/20	ug/L	500	U	500
L309	2,4-Dimethylphenol	05/11/20	ug/L	500	U	500

Summary of Leachate Analytical Data
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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L310	2,4-Dimethylphenol	04/28/21	ug/L	500	U	500
L301	2,4-Dinitrophenol	11/15/19	ug/L	500	U	500
L301	2,4-Dinitrophenol	10/25/21	ug/L	500	U	500
L302	2,4-Dinitrophenol	11/11/20	ug/L	2,560	U	2,560
L309	2,4-Dinitrophenol	05/11/20	ug/L	500	U	500
L310	2,4-Dinitrophenol	04/28/21	ug/L	500	U	500
L301	2,4-Dinitrotoluene	11/15/19	ug/L	100	U	100
L301	2,4-Dinitrotoluene	10/25/21	ug/L	100	U	100
L302	2,4-Dinitrotoluene	11/11/20	ug/L	195	U	195
L309	2,4-Dinitrotoluene	05/11/20	ug/L	100	U	100
L310	2,4-Dinitrotoluene	04/28/21	ug/L	100	U	100
LREP	2,4-Dinitrotoluene	11/11/20	ug/L	197	U	197
L301	2,6-Dinitrotoluene	11/15/19	ug/L	500	U	500
L301	2,6-Dinitrotoluene	10/25/21	ug/L	500	U	500
L302	2,6-Dinitrotoluene	11/11/20	ug/L	500	U	500
L309	2,6-Dinitrotoluene	05/11/20	ug/L	500	U	500
L310	2,6-Dinitrotoluene	04/28/21	ug/L	500	U	500
L301	2-Chloroethyl Vinyl Ether	11/15/19	ug/L	20	U	20
L301	2-Chloroethyl Vinyl Ether	10/25/21	ug/L	20	U	20
L302	2-Chloroethyl Vinyl Ether	11/11/20	ug/L	20	U	20
L309	2-Chloroethyl Vinyl Ether	05/11/20	ug/L	20	U	20
L310	2-Chloroethyl Vinyl Ether	04/28/21	ug/L	24.8	U	24.8
L301	2-Chloronaphthalene	11/15/19	ug/L	100	U	100
L301	2-Chloronaphthalene	10/25/21	ug/L	100	U	100
L302	2-Chloronaphthalene	11/11/20	ug/L	100	U	100
L309	2-Chloronaphthalene	05/11/20	ug/L	100	U	100
L310	2-Chloronaphthalene	04/28/21	ug/L	100	U	100
L301	2-Chlorophenol	11/15/19	ug/L	500	U	500
L301	2-Chlorophenol	10/25/21	ug/L	500	U	500
L302	2-Chlorophenol	11/11/20	ug/L	500	U	500
L309	2-Chlorophenol	05/11/20	ug/L	500	U	500
L310	2-Chlorophenol	04/28/21	ug/L	500	U	500
L301	2-Hexanone	11/15/19	ug/L	100	U	100
L301	2-Hexanone	10/25/21	ug/L	100	U	100
L302	2-Hexanone	11/11/20	ug/L	100	U	100
L309	2-Hexanone	05/11/20	ug/L	100	U	100
L310	2-Hexanone	04/28/21	ug/L	100	U	100
L301	2-Methylphenol (o-Cresol)	11/15/19	ug/L	500	U	500
L301	2-Methylphenol (o-Cresol)	10/25/21	ug/L	500	U	500
L302	2-Methylphenol (o-Cresol)	11/11/20	ug/L	500	U	500
LREP	2-Methylphenol (o-Cresol)	11/11/20	ug/L	500	U	500
L301	2-Nitrophenol	11/15/19	ug/L	500	U	500
L301	2-Nitrophenol	10/25/21	ug/L	500	U	500
L302	2-Nitrophenol	11/11/20	ug/L	500	U	500
L309	2-Nitrophenol	05/11/20	ug/L	500	U	500
L310	2-Nitrophenol	04/28/21	ug/L	500	U	500
L301	2-Propanol	11/15/19	ug/L	4,760		2,500
L301	2-Propanol	10/25/21	ug/L	2,500	U	2,500
L302	2-Propanol	11/11/20	ug/L	28,400		2,500
L309	2-Propanol	05/11/20	ug/L	2,500	U	2,500

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L310	2-Propanol	04/28/21	ug/L	7,160		2,500
L301	3,3-Dichlorobenzidine	11/15/19	ug/L	500	U	500
L301	3,3-Dichlorobenzidine	10/25/21	ug/L	500	U	500
L302	3,3-Dichlorobenzidine	11/11/20	ug/L	2,450	U	2,450
L309	3,3-Dichlorobenzidine	05/11/20	ug/L	500	U	500
L310	3,3-Dichlorobenzidine	04/28/21	ug/L	500	U	500
L301	4,4-DDD	11/15/19	ug/L	1	U	1
L301	4,4-DDD	10/25/21	ug/L	1	U	1
L302	4,4-DDD	11/11/20	ug/L	1	U	1
L309	4,4-DDD	05/11/20	ug/L	1	U	1
L310	4,4-DDD	04/28/21	ug/L	1	U	1
L301	4,4-DDE	11/15/19	ug/L	1	U	1
L301	4,4-DDE	10/25/21	ug/L	1	U	1
L302	4,4-DDE	11/11/20	ug/L	1	U	1
L309	4,4-DDE	05/11/20	ug/L	1	U	1
L310	4,4-DDE	04/28/21	ug/L	1	U	1
L302	4,4-DDT	11/11/20	ug/L	10	U	10
L309	4,4-DDT	05/11/20	ug/L	10	U	10
L310	4,4-DDT	04/28/21	ug/L	10	U	10
L301	4,6-Dinitro-o-Cresol	11/15/19	ug/L	500	U	500
L301	4,6-Dinitro-o-Cresol	10/25/21	ug/L	500	U	500
L302	4,6-Dinitro-o-Cresol	11/11/20	ug/L	1,900	U	1,900
L309	4,6-Dinitro-o-Cresol	05/11/20	ug/L	500	U	500
L310	4,6-Dinitro-o-Cresol	04/28/21	ug/L	500	U	500
L301	4-Bromophenyl Phenyl Ether	11/15/19	ug/L	100	U	100
L301	4-Bromophenyl Phenyl Ether	10/25/21	ug/L	100	U	100
L302	4-Bromophenyl Phenyl Ether	11/11/20	ug/L	124	U	124
L309	4-Bromophenyl Phenyl Ether	05/11/20	ug/L	100	U	100
L310	4-Bromophenyl Phenyl Ether	04/28/21	ug/L	100	U	100
L301	4-Chlorophenyl Phenyl Ether	11/15/19	ug/L	100	U	100
L301	4-Chlorophenyl Phenyl Ether	10/25/21	ug/L	100	U	100
L302	4-Chlorophenyl Phenyl Ether	11/11/20	ug/L	113	U	113
L309	4-Chlorophenyl Phenyl Ether	05/11/20	ug/L	100	U	100
L310	4-Chlorophenyl Phenyl Ether	04/28/21	ug/L	100	U	100
L301	4-Methyl-2-Pentanone (MIBK)	11/15/19	ug/L	100	U	100
L301	4-Methyl-2-Pentanone (MIBK)	10/25/21	ug/L	100	U	100
L302	4-Methyl-2-Pentanone (MIBK)	11/11/20	ug/L	118		100
L309	4-Methyl-2-Pentanone (MIBK)	05/11/20	ug/L	100	U	100
L310	4-Methyl-2-Pentanone (MIBK)	04/28/21	ug/L	181		100
L301	4-Nitrophenol	11/15/19	ug/L	500	U	500
L301	4-Nitrophenol	10/25/21	ug/L	500	U	500
L302	4-Nitrophenol	11/11/20	ug/L	1,110	U	1,110
L309	4-Nitrophenol	05/11/20	ug/L	500	U	500
L310	4-Nitrophenol	04/28/21	ug/L	500	U	500
L301	Acenaphthene	11/15/19	ug/L	100	U	100
L301	Acenaphthene	10/25/21	ug/L	100	U	100
L302	Acenaphthene	11/11/20	ug/L	100	U	100
L309	Acenaphthene	05/11/20	ug/L	100	U	100
L310	Acenaphthene	04/28/21	ug/L	100	U	100
L301	Acetone	11/15/19	ug/L	1,360		500

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Acetone	10/25/21	ug/L	500	U	500
L302	Acetone	11/11/20	ug/L	23,100		500
L309	Acetone	05/11/20	ug/L	500	U	500
L310	Acetone	04/28/21	ug/L	10,800		864
L301	Alachlor	11/15/19	ug/L	20	U	20
L301	Alachlor	10/25/21	ug/L	20	U	20
L302	Alachlor	11/11/20	ug/L	20	U	20
L309	Alachlor	05/11/20	ug/L	20	U	20
L310	Alachlor	04/28/21	ug/L	20	U	20
L301	Aldicarb	11/15/19	ug/L	30	U	30
L301	Aldicarb	10/25/21	ug/L	30	U	30
L302	Aldicarb	11/11/20	ug/L	30	U	30
L309	Aldicarb	05/11/20	ug/L	30	U	30
L310	Aldicarb	04/28/21	ug/L	30	U	30
L301	Aldrin	11/15/19	ug/L	10	U	10
L301	Aldrin	10/25/21	ug/L	10	U	10
L302	Aldrin	11/11/20	ug/L	10	U	10
L309	Aldrin	05/11/20	ug/L	10	U	10
L310	Aldrin	04/28/21	ug/L	10	U	10
L301	Alkalinity, Bicarbonate (as CaCO3)	11/15/19	ug/L	6,800,000		10,000
L301	Alkalinity, Bicarbonate (as CaCO3)	10/25/21	ug/L	2,500,000		10,000
L309	Alkalinity, Bicarbonate (as CaCO3)	05/11/20	ug/L	5,610,000		10,000
L310	Alkalinity, Bicarbonate (as CaCO3)	04/28/21	ug/L	7,850,000		10,000
L301	alpha-BHC	11/15/19	ug/L	10	U	10
L301	alpha-BHC	10/25/21	ug/L	10	U	10
L302	alpha-BHC	11/11/20	ug/L	10	U	10
L309	alpha-BHC	05/11/20	ug/L	10	U	10
L310	alpha-BHC	04/28/21	ug/L	10	U	10
L301	Aluminum, Total	11/15/19	ug/L	1,000	U	1,000
L301	Aluminum, Total	10/25/21	ug/L	2,200		1,000
L302	Aluminum, Total	11/11/20	ug/L	1,000	U	1,000
L309	Aluminum, Total	05/11/20	ug/L	1,000	U	1,000
L310	Aluminum, Total	04/28/21	ug/L	3,410		1,000
L301	Anthracene	11/15/19	ug/L	100	U	100
L301	Anthracene	10/25/21	ug/L	100	U	100
L302	Anthracene	11/11/20	ug/L	100	U	100
L309	Anthracene	05/11/20	ug/L	100	U	100
L310	Anthracene	04/28/21	ug/L	100	U	100
L301	Antimony, Total	11/15/19	ug/L	60	U	60
L301	Antimony, Total	10/25/21	ug/L	60	U	60
L302	Antimony, Total	11/11/20	ug/L	60	U	60
L309	Antimony, Total	05/11/20	ug/L	60	U	60
L310	Antimony, Total	04/28/21	ug/L	60	U	60
L301	Arsenic, Total	11/15/19	ug/L	216		20
L301	Arsenic, Total	10/25/21	ug/L	20		20
L302	Arsenic, Total	11/11/20	ug/L	196		20
L309	Arsenic, Total	05/11/20	ug/L	305		20
L310	Arsenic, Total	04/28/21	ug/L	166		20
LREP	Arsenic, Total	11/11/20	ug/L	201		20
L301	Atrazine	11/15/19	ug/L	30	U	30

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Atrazine	10/25/21	ug/L	30	U	30
L302	Atrazine	11/11/20	ug/L	30	U	30
L309	Atrazine	05/11/20	ug/L	30	U	30
L310	Atrazine	04/28/21	ug/L	30	U	30
L301	Bacteria (Fecal Coliform)	10/25/19	/100 mL	75		10
L301	Bacteria (Fecal Coliform)	10/25/21	/100 mL	1	U, MPN	1
L302	Bacteria (Fecal Coliform)	10/22/20	/100 mL	100		100
L309	Bacteria (Fecal Coliform)	05/11/20	/100 mL	100	U	100
L310	Bacteria (Fecal Coliform)	04/28/21	/100 mL	2,420	>	100
L301	Barium, Total	11/15/19	ug/L	1,000	U	1,000
L301	Barium, Total	10/25/21	ug/L	1,000	U	1,000
L302	Barium, Total	11/11/20	ug/L	1,000	U	1,000
L309	Barium, Total	05/11/20	ug/L	1,000	U	1,000
L310	Barium, Total	04/28/21	ug/L	1,000	U	1,000
LREP	Barium, Total	11/11/20	ug/L	1,000	U	1,000
L301	Benzene	11/15/19	ug/L	20	U	20
L301	Benzene	10/25/21	ug/L	20	U	20
L302	Benzene	11/11/20	ug/L	20	U	20
L309	Benzene	05/11/20	ug/L	20	U	20
L310	Benzene	04/28/21	ug/L	20	U	20
LREP	Benzene	11/11/20	ug/L	20	U	20
L301	Benzo (a) Anthracene	11/15/19	ug/L	100	U	100
L301	Benzo (a) Anthracene	10/25/21	ug/L	100	U	100
L302	Benzo (a) Anthracene	11/11/20	ug/L	100	U	100
L309	Benzo (a) Anthracene	05/11/20	ug/L	100	U	100
L310	Benzo (a) Anthracene	04/28/21	ug/L	100	U	100
L301	Benzo (a) Pyrene	11/15/19	ug/L	100	U	100
L301	Benzo (a) Pyrene	10/25/21	ug/L	100	U	100
L302	Benzo (a) Pyrene	11/11/20	ug/L	291	U	291
L309	Benzo (a) Pyrene	05/11/20	ug/L	100	U	100
L310	Benzo (a) Pyrene	04/28/21	ug/L	100	U	100
L301	Benzo (b) Fluoranthene	11/15/19	ug/L	100	U	100
L301	Benzo (b) Fluoranthene	10/25/21	ug/L	100	U	100
L302	Benzo (b) Fluoranthene	11/11/20	ug/L	288	U	288
L309	Benzo (b) Fluoranthene	05/11/20	ug/L	100	U	100
L310	Benzo (b) Fluoranthene	04/28/21	ug/L	100	U	100
L301	Benzo (ghi) Perylene	11/15/19	ug/L	100	U	100
L301	Benzo (ghi) Perylene	10/25/21	ug/L	100	U	100
L302	Benzo (ghi) Perylene	11/11/20	ug/L	309	U	309
L309	Benzo (ghi) Perylene	05/11/20	ug/L	100	U	100
L310	Benzo (ghi) Perylene	04/28/21	ug/L	100	U	100
L301	Benzo (k) Fluoranthene	11/15/19	ug/L	100	U	100
L301	Benzo (k) Fluoranthene	10/25/21	ug/L	100	U	100
L302	Benzo (k) Fluoranthene	11/11/20	ug/L	193	U	193
L309	Benzo (k) Fluoranthene	05/11/20	ug/L	100	U	100
L310	Benzo (k) Fluoranthene	04/28/21	ug/L	100	U	100
L301	Beryllium, Total	11/15/19	ug/L	40	U	40
L301	Beryllium, Total	10/25/21	ug/L	40	U	40
L302	Beryllium, Total	11/11/20	ug/L	40	U	40
L309	Beryllium, Total	05/11/20	ug/L	40	U	40

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L310	Beryllium, Total	04/28/21	ug/L	40	U	40
L301	beta-BHC	11/15/19	ug/L	1	U	1
L301	beta-BHC	10/25/21	ug/L	1	U	1
L302	beta-BHC	11/11/20	ug/L	1	U	1
L309	beta-BHC	05/11/20	ug/L	1	U	1
L310	beta-BHC	04/28/21	ug/L	1	U	1
L301	Biochemical Oxygen Demand	11/15/19	ug/L	635,000		5,000
L301	Biochemical Oxygen Demand	10/25/21	ug/L	61,000		5,000
L302	Biochemical Oxygen Demand	11/11/20	ug/L	3,480,000		3,480,000
L309	Biochemical Oxygen Demand	05/11/20	ug/L	166,000		100,000
L310	Biochemical Oxygen Demand	04/28/21	ug/L	3,470,000		3,470,000
L301	bis (2-Chloro-1-Methylethyl) Ether	11/15/19	ug/L	100	U	100
L301	bis (2-Chloro-1-Methylethyl) Ether	10/25/21	ug/L	100	U	100
L302	bis (2-Chloro-1-Methylethyl) Ether	11/11/20	ug/L	100	U	100
L309	bis (2-Chloro-1-Methylethyl) Ether	05/11/20	ug/L	100	U	100
L310	bis (2-Chloro-1-Methylethyl) Ether	04/28/21	ug/L	100	U	100
L301	bis (2-Chloroethoxy) Methane	11/15/19	ug/L	100	U	100
L301	bis (2-Chloroethoxy) Methane	10/25/21	ug/L	100	U	100
L302	bis (2-Chloroethoxy) Methane	11/11/20	ug/L	105	U	105
L309	bis (2-Chloroethoxy) Methane	05/11/20	ug/L	100	U	100
L310	bis (2-Chloroethoxy) Methane	04/28/21	ug/L	100	U	100
L301	bis (2-Chloroethyl) Ether	11/15/19	ug/L	100	U	100
L301	bis (2-Chloroethyl) Ether	10/25/21	ug/L	100	U	100
L302	bis (2-Chloroethyl) Ether	11/11/20	ug/L	136	U	136
L309	bis (2-Chloroethyl) Ether	05/11/20	ug/L	100	U	100
L310	bis (2-Chloroethyl) Ether	04/28/21	ug/L	100	U	100
L301	bis (2-Ethylhexyl) Phthalate	11/15/19	ug/L	100	U	100
L301	bis (2-Ethylhexyl) Phthalate	10/25/21	ug/L	519		100
L302	bis (2-Ethylhexyl) Phthalate	11/11/20	ug/L	2,810	U	2,810
L309	bis (2-Ethylhexyl) Phthalate	05/11/20	ug/L	100	U	100
L310	bis (2-Ethylhexyl) Phthalate	04/28/21	ug/L	181	U	181
L302	bis (Chloromethyl) Ether	11/11/20	ug/L	10,000	U	10,000
L309	bis (Chloromethyl) Ether	05/11/20	ug/L	10,000	U	10,000
L310	bis (Chloromethyl) Ether	04/28/21	ug/L	10,000	U	10,000
L301	Boron, Total	11/15/19	ug/L	8,920		100
L301	Boron, Total	10/25/21	ug/L	6,200		100
L302	Boron, Total	11/11/20	ug/L	11,500		100
L309	Boron, Total	05/11/20	ug/L	7,470		100
L310	Boron, Total	04/28/21	ug/L	10,500		100
L301	Bromobenzene	11/15/19	ug/L	20	U	20
L301	Bromobenzene	10/25/21	ug/L	20	U	20
L302	Bromobenzene	11/11/20	ug/L	20	U	20
L309	Bromobenzene	05/11/20	ug/L	20	U	20
L310	Bromobenzene	04/28/21	ug/L	20	U	20
L301	Bromochloromethane	11/15/19	ug/L	20	U	20
L301	Bromochloromethane	10/25/21	ug/L	20	U	20
L302	Bromochloromethane	11/11/20	ug/L	20	U	20
L309	Bromochloromethane	05/11/20	ug/L	20	U	20
L310	Bromochloromethane	04/28/21	ug/L	20	U	20
L301	Bromodichloromethane	11/15/19	ug/L	20	U	20

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Bromodichloromethane	10/25/21	ug/L	20	U	20
L302	Bromodichloromethane	11/11/20	ug/L	20	U	20
L309	Bromodichloromethane	05/11/20	ug/L	20	U	20
L310	Bromodichloromethane	04/28/21	ug/L	20	U	20
L301	Bromoform	11/15/19	ug/L	20	U	20
L301	Bromoform	10/25/21	ug/L	20	U	20
L302	Bromoform	11/11/20	ug/L	39.7	U	39.7
L309	Bromoform	05/11/20	ug/L	39.7	U	39.7
L310	Bromoform	04/28/21	ug/L	38	U	38
L301	Bromomethane (Methyl Bromide)	11/15/19	ug/L	20	U	20
L301	Bromomethane (Methyl Bromide)	10/25/21	ug/L	20	U	20
L302	Bromomethane (Methyl Bromide)	11/11/20	ug/L	20	U	20
L309	Bromomethane (Methyl Bromide)	05/11/20	ug/L	20	U	20
L310	Bromomethane (Methyl Bromide)	04/28/21	ug/L	20	U	20
L301	Butyl Benzyl Phthalate	11/15/19	ug/L	100	U	100
L301	Butyl Benzyl Phthalate	10/25/21	ug/L	100	U	100
L302	Butyl Benzyl Phthalate	11/11/20	ug/L	181	U	181
L309	Butyl Benzyl Phthalate	05/11/20	ug/L	100	U	100
L310	Butyl Benzyl Phthalate	04/28/21	ug/L	100	U	100
L301	Cadmium, Total	11/15/19	ug/L	25	U	25
L301	Cadmium, Total	10/25/21	ug/L	25	U	25
L302	Cadmium, Total	11/11/20	ug/L	25	U	25
L309	Cadmium, Total	05/11/20	ug/L	25	U	25
L310	Cadmium, Total	04/28/21	ug/L	25	U	25
LREP	Cadmium, Total	11/11/20	ug/L	25	U	25
L301	Calcium, Total	11/15/19	ug/L	74,900		10,000
L301	Calcium, Total	10/25/21	ug/L	97,000		10,000
L302	Calcium, Total	11/11/20	ug/L	913,000		10,000
L309	Calcium, Total	05/11/20	ug/L	82,600		10,000
L310	Calcium, Total	04/28/21	ug/L	509,000		10,000
L301	Carbofuran	11/15/19	ug/L	400	U	400
L301	Carbofuran	10/25/21	ug/L	400	U	400
L302	Carbofuran	11/11/20	ug/L	400	U	400
L309	Carbofuran	05/11/20	ug/L	400	U	400
L310	Carbofuran	04/28/21	ug/L	400	U	400
L301	Carbon Disulfide	11/15/19	ug/L	100	U	20
L301	Carbon Disulfide	10/25/21	ug/L	20	U	20
L302	Carbon Disulfide	11/11/20	ug/L	20	U	20
L309	Carbon Disulfide	05/11/20	ug/L	20	U	20
L310	Carbon Disulfide	04/28/21	ug/L	20	U	20
L301	Carbon Tetrachloride	11/15/19	ug/L	20	U	20
L301	Carbon Tetrachloride	10/25/21	ug/L	20	U	20
L302	Carbon Tetrachloride	11/11/20	ug/L	20	U	20
L309	Carbon Tetrachloride	05/11/20	ug/L	20	U	20
L310	Carbon Tetrachloride	04/28/21	ug/L	20	U	20
LREP	Carbon Tetrachloride	11/11/20	ug/L	20	U	20
L301	Chemical Oxygen Demand	11/15/19	ug/L	3,290,000		40,000
L301	Chemical Oxygen Demand	10/25/21	ug/L	2,250,000		40,000
L302	Chemical Oxygen Demand	11/11/20	ug/L	14,600,000		295,000
L309	Chemical Oxygen Demand	05/11/20	ug/L	1,970,000		500,000

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L310	Chemical Oxygen Demand	04/28/21	ug/L	8,990,000		147,000
L301	Chlordane	11/15/19	ug/L	10	U	10
L301	Chlordane	10/25/21	ug/L	10	U	10
L302	Chlordane	11/11/20	ug/L	10	U	10
L309	Chlordane	05/11/20	ug/L	17.3	U	17.3
L310	Chlordane	04/28/21	ug/L	10	U	10
LREP	Chlordane	11/11/20	ug/L	10	U	10
L301	Chloride, Total	11/15/19	ug/L	2,470,000		10,000
L301	Chloride, Total	10/25/21	ug/L	3,250,000		10,000
L302	Chloride, Total	11/11/20	ug/L	2,280,000		43,100
L309	Chloride, Total	05/11/20	ug/L	1,620,000		200,000
L310	Chloride, Total	04/28/21	ug/L	2,550,000		43,100
L301	Chlorobenzene	11/15/19	ug/L	20	U	20
L301	Chlorobenzene	10/25/21	ug/L	20	U	20
L302	Chlorobenzene	11/11/20	ug/L	20	U	20
L309	Chlorobenzene	05/11/20	ug/L	20	U	20
L310	Chlorobenzene	04/28/21	ug/L	20	U	20
LREP	Chlorobenzene	11/11/20	ug/L	20	U	20
L301	Chloroethane	11/15/19	ug/L	20	U	20
L301	Chloroethane	10/25/21	ug/L	20	U	20
L302	Chloroethane	11/11/20	ug/L	20	U	20
L309	Chloroethane	05/11/20	ug/L	20	U	20
L310	Chloroethane	04/28/21	ug/L	20	U	20
L301	Chloroform	11/15/19	ug/L	20	U	20
L301	Chloroform	10/25/21	ug/L	20	U	20
L302	Chloroform	11/11/20	ug/L	20	U	20
L309	Chloroform	05/11/20	ug/L	20	U	20
L310	Chloroform	04/28/21	ug/L	20	U	20
LREP	Chloroform	11/11/20	ug/L	20	U	20
L301	Chloromethane (Methyl Chloride)	11/15/19	ug/L	20	U	20
L301	Chloromethane (Methyl Chloride)	10/25/21	ug/L	20	U	20
L302	Chloromethane (Methyl Chloride)	11/11/20	ug/L	21.9	U	21.9
L309	Chloromethane (Methyl Chloride)	05/11/20	ug/L	21.9	U	21.9
L310	Chloromethane (Methyl Chloride)	04/28/21	ug/L	20	U	20
L301	Chromium, Total	11/15/19	ug/L	174		25
L301	Chromium, Total	10/25/21	ug/L	54		25
L302	Chromium, Total	11/11/20	ug/L	266		25
L309	Chromium, Total	05/11/20	ug/L	382		25
L310	Chromium, Total	04/28/21	ug/L	290		25
LREP	Chromium, Total	11/11/20	ug/L	275		25
L301	Chrysene	11/15/19	ug/L	100	U	100
L301	Chrysene	10/25/21	ug/L	100	U	100
L302	Chrysene	11/11/20	ug/L	100	U	100
L309	Chrysene	05/11/20	ug/L	100	U	100
L310	Chrysene	04/28/21	ug/L	100	U	100
L301	cis-1,2-Dichloroethene	11/15/19	ug/L	20	U	20
L301	cis-1,2-Dichloroethene	10/25/21	ug/L	20	U	20
L302	cis-1,2-Dichloroethene	11/11/20	ug/L	33.4		20
L309	cis-1,2-Dichloroethene	05/11/20	ug/L	20	U	20
L310	cis-1,2-Dichloroethene	04/28/21	ug/L	20	U	20

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Cobalt, Total	11/15/19	ug/L	200	U	200
L301	Cobalt, Total	10/25/21	ug/L	200	U	200
L302	Cobalt, Total	11/11/20	ug/L	200	U	200
L309	Cobalt, Total	05/11/20	ug/L	200	U	200
L310	Cobalt, Total	04/28/21	ug/L	200	U	200
L301	Copper, Total	11/15/19	ug/L	50	U	50
L301	Copper, Total	10/25/21	ug/L	54		50
L302	Copper, Total	11/11/20	ug/L	50	U	50
L309	Copper, Total	05/11/20	ug/L	50	U	50
L310	Copper, Total	04/28/21	ug/L	51.5		50
L301	Cresol	11/15/19	ug/L	500	U	500
L301	Cresol	10/25/21	ug/L	500	U	500
L302	Cresol	11/11/20	ug/L	10,800		500
LREP	Cresol	11/11/20	ug/L	9,270		500
L301	Cyanide, Reactive	11/15/19	ug/L	10,000	U	10,000
L301	Cyanide, Reactive	10/25/21	ug/L	10,000	U	10,000
LREP	Cyanide, Reactive	11/11/20	ug/L	50	U	50
L301	Cyanide, Total	11/15/19	ug/L	50	U	50
L301	Cyanide, Total	10/25/21	ug/L	50	U	50
L302	Cyanide, Total	11/11/20	ug/L	0.01	U	0.01
L309	Cyanide, Total	05/11/20	ug/L	50	U	50
L310	Cyanide, Total	04/28/21	ug/L	50	U	50
L301	delta-BHC	11/15/19	ug/L	1	U	1
L301	delta-BHC	10/25/21	ug/L	1	U	1
L302	delta-BHC	11/11/20	ug/L	1	U	1
L309	delta-BHC	05/11/20	ug/L	1	U	1
L310	delta-BHC	04/28/21	ug/L	1	U	1
L301	Dibenzo (a,h) Anthracene	11/15/19	ug/L	100	U	100
L301	Dibenzo (a,h) Anthracene	10/25/21	ug/L	100	U	100
L302	Dibenzo (a,h) Anthracene	11/11/20	ug/L	342	U	342
L309	Dibenzo (a,h) Anthracene	05/11/20	ug/L	100	U	100
L310	Dibenzo (a,h) Anthracene	04/28/21	ug/L	100	U	100
L301	Dibromochloromethane	11/15/19	ug/L	20	U	20
L301	Dibromochloromethane	10/25/21	ug/L	20	U	20
L302	Dibromochloromethane	11/11/20	ug/L	26	U	26
L309	Dibromochloromethane	05/11/20	ug/L	26	U	26
L310	Dibromochloromethane	04/28/21	ug/L	26.4	U	26.4
L301	Dibromomethane (Methylene Bromide)	11/15/19	ug/L	20	U	20
L301	Dibromomethane (Methylene Bromide)	10/25/21	ug/L	20	U	20
L302	Dibromomethane (Methylene Bromide)	11/11/20	ug/L	20	U	20
L309	Dibromomethane (Methylene Bromide)	05/11/20	ug/L	20	U	20
L310	Dibromomethane (Methylene Bromide)	04/28/21	ug/L	20	U	20
L301	Dichlorodifluoromethane	11/15/19	ug/L	20	U	20
L301	Dichlorodifluoromethane	10/25/21	ug/L	20	U	20
L302	Dichlorodifluoromethane	11/11/20	ug/L	20	U	20
L309	Dichlorodifluoromethane	05/11/20	ug/L	20	U	20
L310	Dichlorodifluoromethane	04/28/21	ug/L	20	U	20
L301	Dieldrin	11/15/19	ug/L	10	U	10
L301	Dieldrin	10/25/21	ug/L	10	U	10
L302	Dieldrin	11/11/20	ug/L	10	U	10

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L309	Dieldrin	05/11/20	ug/L	10	U	10
L310	Dieldrin	04/28/21	ug/L	10	U	10
L301	Diethyl Phthalate	11/15/19	ug/L	100	U	100
L301	Diethyl Phthalate	10/25/21	ug/L	100	U	100
L302	Diethyl Phthalate	11/11/20	ug/L	902	U	902
L309	Diethyl Phthalate	05/11/20	ug/L	100	U	100
L310	Diethyl Phthalate	04/28/21	ug/L	100	U	100
L301	Dimethyl Phthalate	11/15/19	ug/L	100	U	100
L301	Dimethyl Phthalate	10/25/21	ug/L	100	U	100
L302	Dimethyl Phthalate	11/11/20	ug/L	100	U	100
L309	Dimethyl Phthalate	05/11/20	ug/L	100	U	100
L310	Dimethyl Phthalate	04/28/21	ug/L	100	U	100
L301	Di-N-Butyl Phthalate	11/15/19	ug/L	100	U	100
L301	Di-N-Butyl Phthalate	10/25/21	ug/L	100	U	100
L302	Di-N-Butyl Phthalate	11/11/20	ug/L	2,230	U	2,230
L309	Di-N-Butyl Phthalate	05/11/20	ug/L	100	U	100
L310	Di-N-Butyl Phthalate	04/28/21	ug/L	144	U	144
L301	Di-N-Octyl Phthalate	11/15/19	ug/L	100	U	100
L301	Di-N-Octyl Phthalate	10/25/21	ug/L	100	U	100
L302	Di-N-Octyl Phthalate	11/11/20	ug/L	1,460	U	1,460
L309	Di-N-Octyl Phthalate	05/11/20	ug/L	100	U	100
L310	Di-N-Octyl Phthalate	04/28/21	ug/L	100	U	100
L301	Endosulfan I	11/15/19	ug/L	1	U	1
L301	Endosulfan I	10/25/21	ug/L	1	U	1
L302	Endosulfan I	11/11/20	ug/L	1	U	1
L309	Endosulfan I	05/11/20	ug/L	1	U	1
L310	Endosulfan I	04/28/21	ug/L	1	U	1
L301	Endosulfan II	11/15/19	ug/L	1	U	1
L301	Endosulfan II	10/25/21	ug/L	1	U	1
L302	Endosulfan II	11/11/20	ug/L	1	U	1
L309	Endosulfan II	05/11/20	ug/L	1	U	1
L310	Endosulfan II	04/28/21	ug/L	1	U	1
L301	Endosulfan Sulfate	11/15/19	ug/L	1	U	1
L301	Endosulfan Sulfate	10/25/21	ug/L	1	U	1
L302	Endosulfan Sulfate	11/11/20	ug/L	1	U	1
L309	Endosulfan Sulfate	05/11/20	ug/L	1	U	1
L310	Endosulfan Sulfate	04/28/21	ug/L	1	U	1
L301	Endrin	11/15/19	ug/L	2	U	2
L301	Endrin	10/25/21	ug/L	2	U	2
L302	Endrin	11/11/20	ug/L	2	U	2
L309	Endrin	05/11/20	ug/L	2	U	2
L310	Endrin	04/28/21	ug/L	2	U	2
LREP	Endrin	11/11/20	ug/L	2	U	2
L301	Endrin Aldehyde	11/15/19	ug/L	5	U	5
L301	Endrin Aldehyde	10/25/21	ug/L	5	U	5
L302	Endrin Aldehyde	11/11/20	ug/L	5	U	5
L309	Endrin Aldehyde	05/11/20	ug/L	5	U	5
L310	Endrin Aldehyde	04/28/21	ug/L	5	U	5
L301	Ethyl Acetate	11/15/19	ug/L	200	U	200
L301	Ethyl Acetate	10/25/21	ug/L	200	U	200

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L302	Ethyl Acetate	11/11/20	ug/L	200	U	200
L309	Ethyl Acetate	05/11/20	ug/L	200	U	200
L310	Ethyl Acetate	04/28/21	ug/L	200	U	200
L301	Ethylbenzene	11/15/19	ug/L	20	U	20
L301	Ethylbenzene	10/25/21	ug/L	20	U	20
L302	Ethylbenzene	11/11/20	ug/L	20	U	20
L309	Ethylbenzene	05/11/20	ug/L	20	U	20
L310	Ethylbenzene	04/28/21	ug/L	20	U	20
L301	Ethylene Dibromide (EDB)	11/15/19	ug/L	20	U	20
L301	Ethylene Dibromide (EDB)	10/25/21	ug/L	20	U	20
L302	Ethylene Dibromide (EDB)	11/11/20	ug/L	20	U	20
L309	Ethylene Dibromide (EDB)	05/11/20	ug/L	20	U	20
L310	Ethylene Dibromide (EDB)	04/28/21	ug/L	20	U	20
L301	Flashpoint, PMCC	11/15/19	°F	212	>	1
L301	Flashpoint, PMCC	10/25/21	°F	212	>	212
LREP	Flashpoint, PMCC	11/11/20	°F	200	>	200
L301	Fluoranthene	11/15/19	ug/L	100	U	100
L301	Fluoranthene	10/25/21	ug/L	100	U	100
L302	Fluoranthene	11/11/20	ug/L	152	U	152
L309	Fluoranthene	05/11/20	ug/L	100	U	100
L310	Fluoranthene	04/28/21	ug/L	100	U	100
L301	Fluorene	11/15/19	ug/L	100	U	100
L301	Fluorene	10/25/21	ug/L	100	U	100
L302	Fluorene	11/11/20	ug/L	100	U	100
L309	Fluorene	05/11/20	ug/L	100	U	100
L310	Fluorene	04/28/21	ug/L	100	U	100
L301	Fluoride, Total	11/15/19	ug/L	560		500
L301	Fluoride, Total	10/25/21	ug/L	730		500
L302	Fluoride, Total	11/11/20	ug/L	475,000	U	475,000
L309	Fluoride, Total	05/11/20	ug/L	1,900	U	1,900
L310	Fluoride, Total	04/28/21	ug/L	95,000	U	95,000
L301	Heptachlor	11/15/19	ug/L	1	U	1
L301	Heptachlor	10/25/21	ug/L	1	U	1
L302	Heptachlor	11/11/20	ug/L	1	U	1
L309	Heptachlor	05/11/20	ug/L	1	U	1
L310	Heptachlor	04/28/21	ug/L	1	U	1
LREP	Heptachlor	11/11/20	ug/L	1	U	1
L301	Heptachlor Epoxide	11/15/19	ug/L	8	U	8
L301	Heptachlor Epoxide	10/25/21	ug/L	8	U	8
L302	Heptachlor Epoxide	11/11/20	ug/L	5	U	5
L309	Heptachlor Epoxide	05/11/20	ug/L	5	U	5
L310	Heptachlor Epoxide	04/28/21	ug/L	5	U	5
LREP	Heptachlor Epoxide	11/11/20	ug/L	5	U	5
L301	Hexachlorobenzene	11/15/19	ug/L	100	U	100
L301	Hexachlorobenzene	10/25/21	ug/L	100	U	100
L302	Hexachlorobenzene	11/11/20	ug/L	128	U	128
L309	Hexachlorobenzene	05/11/20	ug/L	100	U	100
L310	Hexachlorobenzene	04/28/21	ug/L	100	U	100
LREP	Hexachlorobenzene	11/11/20	ug/L	129	U	129
L301	Hexachlorobutadiene	11/15/19	ug/L	100	U	100
L301	Hexachlorobutadiene	10/25/21	ug/L	100	U	100
L302	Hexachlorobutadiene	11/11/20	ug/L	193	U	193
L309	Hexachlorobutadiene	05/11/20	ug/L	100	U	100
L310	Hexachlorobutadiene	04/28/21	ug/L	100	U	100

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
LREP	Hexachlorobutadiene	11/11/20	ug/L	195	U	195
L301	Hexachlorocyclopentadiene	11/15/19	ug/L	100	U	100
L301	Hexachlorocyclopentadiene	10/25/21	ug/L	100	U	100
L302	Hexachlorocyclopentadiene	11/11/20	ug/L	1,690	U	1,690
L309	Hexachlorocyclopentadiene	05/11/20	ug/L	100	U	100
L310	Hexachlorocyclopentadiene	04/28/21	ug/L	109	U	109
L301	Hexachloroethane	11/15/19	ug/L	100	U	100
L301	Hexachloroethane	10/25/21	ug/L	100	U	100
L302	Hexachloroethane	11/11/20	ug/L	170	U	170
L309	Hexachloroethane	05/11/20	ug/L	100	U	100
L310	Hexachloroethane	04/28/21	ug/L	100	U	100
LREP	Hexachloroethane	11/11/20	ug/L	172	U	172
L301	Indeno (1,2,3-cd) Pyrene	11/15/19	ug/L	100	U	100
L301	Indeno (1,2,3-cd) Pyrene	10/25/21	ug/L	100	U	100
L302	Indeno (1,2,3-cd) Pyrene	11/11/20	ug/L	389	U	389
L309	Indeno (1,2,3-cd) Pyrene	05/11/20	ug/L	100	U	100
L310	Indeno (1,2,3-cd) Pyrene	04/28/21	ug/L	100	U	100
L301	Iodomethane	11/15/19	ug/L	20	U	20
L301	Iodomethane	10/25/21	ug/L	20	U	20
L302	Iodomethane	11/11/20	ug/L	20	U	20
L309	Iodomethane	05/11/20	ug/L	88.7	U	88.7
L310	Iodomethane	04/28/21	ug/L	73.6	U	73.6
L301	Iron, Total	11/15/19	ug/L	800		200
L301	Iron, Total	10/25/21	ug/L	17,400		200
L302	Iron, Total	11/11/20	ug/L	149,000		200
L309	Iron, Total	05/11/20	ug/L	1,740		200
L310	Iron, Total	04/28/21	ug/L	31,800		1,130
L301	Isopropylbenzene	11/15/19	ug/L	20	U	20
L301	Isopropylbenzene	10/25/21	ug/L	20	U	20
L302	Isopropylbenzene	11/11/20	ug/L	20	U	20
L309	Isopropylbenzene	05/11/20	ug/L	20	U	20
L310	Isopropylbenzene	04/28/21	ug/L	20	U	20
L301	Lead, Total	11/15/19	ug/L	25	U	25
L301	Lead, Total	10/25/21	ug/L	25	U	25
L302	Lead, Total	11/11/20	ug/L	25	U	25
L309	Lead, Total	05/11/20	ug/L	25	U	25
L310	Lead, Total	04/28/21	ug/L	25	U	25
LREP	Lead, Total	11/11/20	ug/L	25	U	25
L301	Lindane (gamma-BHC)	11/15/19	ug/L	1	U	1
L301	Lindane (gamma-BHC)	10/25/21	ug/L	1	U	1
L302	Lindane (gamma-BHC)	11/11/20	ug/L	1	U	1
L309	Lindane (gamma-BHC)	05/11/20	ug/L	1	U	1
L310	Lindane (gamma-BHC)	04/28/21	ug/L	1	U	1
LREP	Lindane (gamma-BHC)	11/11/20	ug/L	1	U	1
L301	m&p Xylene	11/15/19	ug/L	14.2		5
L301	m&p Xylene	10/25/21	ug/L	46.6		20
L302	m&p Xylene	11/11/20	ug/L	24		20
L309	m&p Xylene	05/11/20	ug/L	20	U	20
L310	m&p Xylene	04/28/21	ug/L	37.6		20
L301	m&p-Cresols	11/15/19	ug/L	500	U	500
L301	m&p-Cresols	10/25/21	ug/L	500	U	500
L301	Magnesium, Total	11/15/19	ug/L	123,000		10,000
L301	Magnesium, Total	10/25/21	ug/L	240,000		10,000
L302	Magnesium, Total	11/11/20	ug/L	312,000		10,000

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Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L309	Magnesium, Total	05/11/20	ug/L	191,000		10,000
L310	Magnesium, Total	04/28/21	ug/L	439,000		10,000
L301	Manganese, Total	11/15/19	ug/L	114		50
L301	Manganese, Total	10/25/21	ug/L	312		50
L302	Manganese, Total	11/11/20	ug/L	6,080		50
L309	Manganese, Total	05/11/20	ug/L	168		50
L310	Manganese, Total	04/28/21	ug/L	1,880		50
L301	Mercury, Total	11/15/19	ug/L	4	U	4
L301	Mercury, Total	10/25/21	ug/L	4	U	4
L302	Mercury, Total	11/11/20	ug/L	4	U	4
L309	Mercury, Total	05/11/20	ug/L	4	U	4
L310	Mercury, Total	04/28/21	ug/L	4	U	4
LREP	Mercury, Total	11/11/20	ug/L	4	U	4
L301	Methoxychlor	11/15/19	ug/L	10	U	10
L301	Methoxychlor	10/25/21	ug/L	10	U	10
L302	Methoxychlor	11/11/20	ug/L	10	U	10
L309	Methoxychlor	05/11/20	ug/L	10	U	10
L310	Methoxychlor	04/28/21	ug/L	10	U	10
LREP	Methoxychlor	11/11/20	ug/L	10	U	10
L301	Methyl Ethyl Ketone (2-Butanone)	11/15/19	ug/L	1,460		100
L301	Methyl Ethyl Ketone (2-Butanone)	10/25/21	ug/L	100	U	100
L302	Methyl Ethyl Ketone (2-Butanone)	11/11/20	ug/L	30,900		734
L309	Methyl Ethyl Ketone (2-Butanone)	05/11/20	ug/L	100	U	100
L310	Methyl Ethyl Ketone (2-Butanone)	04/28/21	ug/L	17,900		652
LREP	Methyl Ethyl Ketone (2-Butanone)	11/11/20	ug/L	24,100		734
L301	Methylene Chloride (Dichloromethane)	11/15/19	ug/L	40	U	40
L301	Methylene Chloride (Dichloromethane)	10/25/21	ug/L	40	U	40
L302	Methylene Chloride (Dichloromethane)	11/11/20	ug/L	40	U	40
L309	Methylene Chloride (Dichloromethane)	05/11/20	ug/L	40	U	40
L310	Methylene Chloride (Dichloromethane)	04/28/21	ug/L	40	U	40
L301	Naphthalene	11/15/19	ug/L	100	U	100
L301	Naphthalene	10/25/21	ug/L	100	U	100
L302	Naphthalene	11/11/20	ug/L	632	U	632
L309	Naphthalene	05/11/20	ug/L	100	U	100
L310	Naphthalene	04/28/21	ug/L	100	U	100
L301	n-Butylbenzene	11/15/19	ug/L	20	U	20
L301	n-Butylbenzene	10/25/21	ug/L	20	U	20
L302	n-Butylbenzene	11/11/20	ug/L	20	U	20
L309	n-Butylbenzene	05/11/20	ug/L	20	U	20
L310	n-Butylbenzene	04/28/21	ug/L	20	U	20
L301	Nickel, Total	11/15/19	ug/L	140		100
L301	Nickel, Total	10/25/21	ug/L	330		100
L302	Nickel, Total	11/11/20	ug/L	294		100
L309	Nickel, Total	05/11/20	ug/L	181		100
L310	Nickel, Total	04/28/21	ug/L	350		100
L301	Nitrobenzene	11/15/19	ug/L	100	U	100
L301	Nitrobenzene	10/25/21	ug/L	100	U	100
L302	Nitrobenzene	11/11/20	ug/L	108	U	108
L309	Nitrobenzene	05/11/20	ug/L	100	U	100
L310	Nitrobenzene	04/28/21	ug/L	100	U	100
LREP	Nitrobenzene	11/11/20	ug/L	109	U	109
L301	Nitrogen-Ammonia, Total	11/15/19	ug/L	1,150,000		5,000
L301	Nitrogen-Ammonia, Total	10/25/21	ug/L	668,000		5,000
L302	Nitrogen-Ammonia, Total	11/11/20	ug/L	1,170,000		14,300

Summary of Leachate Analytical Data
4th Quarter 2019 through 4th Quarter 2021

Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L309	Nitrogen-Ammonia, Total	05/11/20	ug/L	998,000		14,300
L310	Nitrogen-Ammonia, Total	04/28/21	ug/L	1,400,000		14,300
L301	N-Nitrate, Total	11/15/19	ug/L	5,000	U	5,000
L301	N-Nitrate, Total	10/25/21	ug/L	10,800		5,000
L302	N-Nitrate, Total	11/11/20	ug/L	5,000	U	5,000
L309	N-Nitrate, Total	05/11/20	ug/L	5,000	U	5,000
L310	N-Nitrate, Total	04/28/21	ug/L	5,000	U	5,000
L301	n-Nitrosodimethylamine	11/15/19	ug/L	100	U	100
L301	n-Nitrosodimethylamine	10/25/21	ug/L	100	U	100
L302	n-Nitrosodimethylamine	11/11/20	ug/L	121	U	121
L309	n-Nitrosodimethylamine	05/11/20	ug/L	100	U	100
L310	n-Nitrosodimethylamine	04/28/21	ug/L	100	U	100
L301	n-Nitrosodiphenylamine	11/15/19	ug/L	100	U	100
L301	n-Nitrosodiphenylamine	10/25/21	ug/L	100	U	100
L302	n-Nitrosodiphenylamine	11/11/20	ug/L	100	U	100
L309	n-Nitrosodiphenylamine	05/11/20	ug/L	100	U	100
L310	n-Nitrosodiphenylamine	04/28/21	ug/L	100	U	100
L301	n-Nitrosodipropylamine	11/15/19	ug/L	100	U	100
L301	n-Nitrosodipropylamine	10/25/21	ug/L	100	U	100
L302	n-Nitrosodipropylamine	11/11/20	ug/L	247	U	247
L309	n-Nitrosodipropylamine	05/11/20	ug/L	100	U	100
L310	n-Nitrosodipropylamine	04/28/21	ug/L	100	U	100
L301	n-Propylbenzene	11/15/19	ug/L	20	U	20
L301	n-Propylbenzene	10/25/21	ug/L	20	U	20
L302	n-Propylbenzene	11/11/20	ug/L	20	U	20
L309	n-Propylbenzene	05/11/20	ug/L	20	U	20
L310	n-Propylbenzene	04/28/21	ug/L	20	U	20
L301	o-Chlorotoluene	11/15/19	ug/L	20	U	20
L301	o-Chlorotoluene	10/25/21	ug/L	20	U	20
L302	o-Chlorotoluene	11/11/20	ug/L	20	U	20
L309	o-Chlorotoluene	05/11/20	ug/L	20	U	20
L310	o-Chlorotoluene	04/28/21	ug/L	20	U	20
L301	Oil (hexane soluble or equivalent)	11/15/19	ug/L	20,000	U	20,000
L301	Oil (hexane soluble or equivalent)	10/25/21	ug/L	185,000		20,000
L302	Oil (hexane soluble or equivalent)	11/11/20	ug/L	20,000	U	20,000
L309	Oil (hexane soluble or equivalent)	05/11/20	ug/L	20,000	U	20,000
L310	Oil (hexane soluble or equivalent)	04/28/21	ug/L	69,100		20,000
L301	o-Xylene	11/15/19	ug/L	9.2		5
L301	o-Xylene	10/25/21	ug/L	20	U	20
L302	o-Xylene	11/11/20	ug/L	20	U	20
L309	o-Xylene	05/11/20	ug/L	20	U	20
L310	o-Xylene	04/28/21	ug/L	20	U	20
L301	Parathion	11/15/19	ug/L	10	U	10
L301	Parathion	10/25/21	ug/L	10	U	10
L302	Parathion	11/11/20	ug/L	2,850	U	2,850
L309	Parathion	05/11/20	ug/L	10	U	10
L310	Parathion	04/28/21	ug/L	184	U	184
L301	p-Chlorotoluene	11/15/19	ug/L	20	U	20
L301	p-Chlorotoluene	10/25/21	ug/L	20	U	20
L302	p-Chlorotoluene	11/11/20	ug/L	20	U	20
L309	p-Chlorotoluene	05/11/20	ug/L	20	U	20
L310	p-Chlorotoluene	04/28/21	ug/L	20	U	20
L301	Pentachlorophenol	11/15/19	ug/L	500	U	500
L301	Pentachlorophenol	10/25/21	ug/L	500	U	500

Summary of Leachate Analytical Data
4th Quarter 2019 through 4th Quarter 2021

Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L302	Pentachlorophenol	11/11/20	ug/L	1,950	U	1,950
L309	Pentachlorophenol	05/11/20	ug/L	500	U	500
L310	Pentachlorophenol	04/28/21	ug/L	500	U	500
LREP	Pentachlorophenol	11/11/20	ug/L	1,970	U	1,970
L301	pH	11/15/19	su	7.44		0.01
L301	pH	10/25/21	su	8.05		0.01
L301	pH	10/25/21	su	8.05		0.01
L302	pH	11/11/20	su	6.96		0.01
L309	pH	05/11/20	su	7.51		0.01
L310	pH	04/28/21	su	7.35		0.01
L301	Phenanthrene	11/15/19	ug/L	100	U	100
L301	Phenanthrene	10/25/21	ug/L	100	U	100
L302	Phenanthrene	11/11/20	ug/L	159	U	159
L309	Phenanthrene	05/11/20	ug/L	100	U	100
L310	Phenanthrene	04/28/21	ug/L	100	U	100
L301	Phenols, Total	11/15/19	ug/L	4,600		100
L301	Phenols, Total	10/25/21	ug/L	110		100
L302	Phenols, Total	11/11/20	ug/L	2,680		100
L309	Phenols, Total	05/11/20	ug/L	178		100
L310	Phenols, Total	04/28/21	ug/L	2,260		160
L301	Phosphorus, Total	11/15/19	ug P/L	8,500		500
L301	Phosphorus, Total	10/25/21	ug P/L	1,120		500
L302	Phosphorus, Total	11/11/20	ug P/L	11,100		500
L309	Phosphorus, Total	05/11/20	ug P/L	6,800		500
L310	Phosphorus, Total	04/28/21	ug P/L	9,400		500
L301	p-Isopropyltoluene	11/15/19	ug/L	20	U	20
L301	p-Isopropyltoluene	10/25/21	ug/L	20	U	20
L302	p-Isopropyltoluene	11/11/20	ug/L	20	U	20
L309	p-Isopropyltoluene	05/11/20	ug/L	20	U	20
L310	p-Isopropyltoluene	04/28/21	ug/L	51.3		20
L301	Polychlorinated Biphenyls (PCBs)	11/15/19	ug/L	1	U	1
L301	Polychlorinated Biphenyls (PCBs)	10/25/21	ug/L	1	U	1
L302	Polychlorinated Biphenyls (PCBs)	11/11/20	ug/L	1.1	U	1.1
L309	Polychlorinated Biphenyls (PCBs)	05/11/20	ug/L	1	U	1
L310	Polychlorinated Biphenyls (PCBs)	04/28/21	ug/L	1.1	U	1.1
L301	Potassium, Total	11/15/19	ug/L	448,000		10,000
L301	Potassium, Total	10/25/21	ug/L	405,000		10,000
L302	Potassium, Total	11/11/20	ug/L	658,000		16,200
L309	Potassium, Total	05/11/20	ug/L	552,000		32,500
L310	Potassium, Total	04/28/21	ug/L	731,000		32,500
L301	Pyrene	11/15/19	ug/L	100	U	100
L301	Pyrene	10/25/21	ug/L	100	U	100
L302	Pyrene	11/11/20	ug/L	161	U	161
L309	Pyrene	05/11/20	ug/L	100	U	100
L310	Pyrene	04/28/21	ug/L	100	U	100
L301	Pyridine	11/15/19	ug/L	500	U	500
L301	Pyridine	10/25/21	ug/L	500	U	500
L302	Pyridine	11/11/20	ug/L	1,410	U	1,410
LREP	Pyridine	11/11/20	ug/L	1,420	U	1,420
L301	sec-Butylbenzene	11/15/19	ug/L	20	U	20
L301	sec-Butylbenzene	10/25/21	ug/L	20	U	20
L302	sec-Butylbenzene	11/11/20	ug/L	20	U	20
L309	sec-Butylbenzene	05/11/20	ug/L	20	U	20
L310	sec-Butylbenzene	04/28/21	ug/L	20	U	20

Summary of Leachate Analytical Data
4th Quarter 2019 through 4th Quarter 2021

Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Selenium, Total	11/15/19	ug/L	50	U	50
L301	Selenium, Total	10/25/21	ug/L	50	U	50
L302	Selenium, Total	11/11/20	ug/L	50	U	50
L309	Selenium, Total	05/11/20	ug/L	50	U	50
L310	Selenium, Total	04/28/21	ug/L	50	U	50
LREP	Selenium, Total	11/11/20	ug/L	50	U	50
L301	Silver, Total	11/15/19	ug/L	50	U	50
L301	Silver, Total	10/25/21	ug/L	50	U	50
L302	Silver, Total	11/11/20	ug/L	50	U	50
L309	Silver, Total	05/11/20	ug/L	50	U	50
L310	Silver, Total	04/28/21	ug/L	50	U	50
LREP	Silver, Total	11/11/20	ug/L	50	U	50
L301	Sodium, Total	11/15/19	ug/L	1,510,000		10,000
L301	Sodium, Total	10/25/21	ug/L	1,600,000		10,000
L302	Sodium, Total	11/11/20	ug/L	2,020,000		17,500
L309	Sodium, Total	05/11/20	ug/L	1,580,000		35,000
L310	Sodium, Total	04/28/21	ug/L	1,940,000		35,000
L301	Specific Conductance	11/15/19	umhos/cm	16,400		1
L301	Specific Conductance	10/25/21	umhos/cm	14,020		1
L301	Styrene	11/15/19	ug/L	20	U	20
L301	Styrene	10/25/21	ug/L	20	U	20
L302	Styrene	11/11/20	ug/L	30.1	U	30.1
L309	Styrene	05/11/20	ug/L	30.1	U	30.1
L310	Styrene	04/28/21	ug/L	20	U	20
L301	Sulfate, Total	11/15/19	ug/L	150,000		50,000
L301	Sulfate, Total	10/25/21	ug/L	250,000		50,000
L302	Sulfate, Total	11/11/20	ug/L	300,000		50,000
L309	Sulfate, Total	05/11/20	ug/L	90,700		50,000
L310	Sulfate, Total	04/28/21	ug/L	50,000	U	50,000
L301	Sulfide, Reactive	11/15/19	ug/L	10,000	U	10,000
L301	Sulfide, Reactive	10/25/21	ug/L	10,000	U	10,000
LREP	Sulfide, Reactive	11/11/20	ug/L	1,000	U	1,000
L301	tert-Butylbenzene	11/15/19	ug/L	20	U	20
L301	tert-Butylbenzene	10/25/21	ug/L	20	U	20
L302	tert-Butylbenzene	11/11/20	ug/L	20	U	20
L309	tert-Butylbenzene	05/11/20	ug/L	20	U	20
L310	tert-Butylbenzene	04/28/21	ug/L	20	U	20
L301	Tetrachlorodibenzo-p-Dioxins	10/25/21	ug/L	50	U	50
L302	Tetrachlorodibenzo-p-Dioxins	11/11/20	ug/L	10	U	10
L309	Tetrachlorodibenzo-p-Dioxins	05/11/20	ug/L	10	U	10
L310	Tetrachlorodibenzo-p-Dioxins	04/28/21	ug/L	5	U	5
L301	Tetrachloroethene	11/15/19	ug/L	20	U	20
L301	Tetrachloroethene	10/25/21	ug/L	20	U	20
L302	Tetrachloroethene	11/11/20	ug/L	20	U	20
L309	Tetrachloroethene	05/11/20	ug/L	20	U	20
L310	Tetrachloroethene	04/28/21	ug/L	20	U	20
LREP	Tetrachloroethene	11/11/20	ug/L	20	U	20
L301	Tetrahydrofuran	11/15/19	ug/L	527		20
L301	Tetrahydrofuran	10/25/21	ug/L	69		20
L302	Tetrahydrofuran	11/11/20	ug/L	1,400		23.2
L309	Tetrahydrofuran	05/11/20	ug/L	528		23.2
L310	Tetrahydrofuran	04/28/21	ug/L	2,050		24.2
L301	Thallium, Total	11/15/19	ug/L	50	U	50
L301	Thallium, Total	10/25/21	ug/L	50	U	50

Summary of Leachate Analytical Data
4th Quarter 2019 through 4th Quarter 2021

Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L302	Thallium, Total	11/11/20	ug/L	50	U	50
L309	Thallium, Total	05/11/20	ug/L	50	U	50
L310	Thallium, Total	04/28/21	ug/L	50	U	50
L301	Tin, Total	11/15/19	ug/L	100	U	100
L301	Tin, Total	10/25/21	ug/L	100	U	100
L302	Tin, Total	11/11/20	ug/L	100	U	100
L309	Tin, Total	05/11/20	ug/L	100	U	100
L310	Tin, Total	04/28/21	ug/L	100	U	100
L301	Toluene	11/15/19	ug/L	23.8		20
L301	Toluene	10/25/21	ug/L	20	U	20
L302	Toluene	11/11/20	ug/L	91.6		20
L309	Toluene	05/11/20	ug/L	20	U	20
L310	Toluene	04/28/21	ug/L	271		20
L301	Total Dissolved Solids	11/15/19	ug/L	8,120,000		10,000
L301	Total Dissolved Solids	10/25/21	ug/L	6,960,000		10,000
L302	Total Dissolved Solids	11/11/20	ug/L	15,200,000		43,400
L309	Total Dissolved Solids	05/11/20	ug/L	5,460,000		86,700
L310	Total Dissolved Solids	04/28/21	ug/L	4,250,000		43,400
L301	Total Organic Carbon	11/15/19	ug/L	790,000		10,000
L301	Total Organic Carbon	10/25/21	ug/L	270,000		10,000
L302	Total Organic Carbon	11/11/20	ug/L	6,620,000		83,000
L309	Total Organic Carbon	05/11/20	ug/L	493,000		75,000
L310	Total Organic Carbon	04/28/21	ug/L	2,760,000		41,500
L301	Total Suspended Solids	11/15/19	ug/L	62,000		40,000
L301	Total Suspended Solids	10/25/21	ug/L	671,000		40,000
L302	Total Suspended Solids	11/11/20	ug/L	583,000		15,800
L309	Total Suspended Solids	05/11/20	ug/L	40,000	U	40,000
L310	Total Suspended Solids	04/28/21	ug/L	217,000		40,000
L301	Toxaphene	11/15/19	ug/L	10	U	10
L301	Toxaphene	10/25/21	ug/L	10	U	10
L302	Toxaphene	11/11/20	ug/L	16.7	U	16.7
L309	Toxaphene	05/11/20	ug/L	33	U	33
L310	Toxaphene	04/28/21	ug/L	17.8	U	17.8
LREP	Toxaphene	11/11/20	ug/L	16.7	U	16.7
L301	trans-1,2-Dichloroethene	11/15/19	ug/L	20	U	20
L301	trans-1,2-Dichloroethene	10/25/21	ug/L	20	U	20
L302	trans-1,2-Dichloroethene	11/11/20	ug/L	20	U	20
L309	trans-1,2-Dichloroethene	05/11/20	ug/L	50	U	50
L310	trans-1,2-Dichloroethene	04/28/21	ug/L	20	U	20
L301	trans-1,3-Dichloropropene	11/15/19	ug/L	20	U	20
L301	trans-1,3-Dichloropropene	10/25/21	ug/L	20	U	20
L302	trans-1,3-Dichloropropene	11/11/20	ug/L	43.7	U	43.7
L309	trans-1,3-Dichloropropene	05/11/20	ug/L	43.7	U	43.7
L310	trans-1,3-Dichloropropene	04/28/21	ug/L	34.6	U	34.6
L302	trans-1,4-Dichloro-2-Butene	11/11/20	ug/L	47	U	47
L309	trans-1,4-Dichloro-2-Butene	05/11/20	ug/L	47	U	47
L310	trans-1,4-Dichloro-2-Butene	04/28/21	ug/L	20	U	20
L301	Trichloroethene	11/15/19	ug/L	20	U	20
L301	Trichloroethene	10/25/21	ug/L	20	U	20
L302	Trichloroethene	11/11/20	ug/L	20	U	20
L309	Trichloroethene	05/11/20	ug/L	20	U	20
L310	Trichloroethene	04/28/21	ug/L	20	U	20
LREP	Trichloroethene	11/11/20	ug/L	20	U	20
L301	Trichlorofluoromethane	11/15/19	ug/L	20	U	20

Summary of Leachate Analytical Data
4th Quarter 2019 through 4th Quarter 2021

Sample	Parameter Name	Date	Units	Result	Qualifier	SQL
L301	Trichlorofluoromethane	10/25/21	ug/L	20	U	20
L302	Trichlorofluoromethane	11/11/20	ug/L	20	U	20
L309	Trichlorofluoromethane	05/11/20	ug/L	20	U	20
L310	Trichlorofluoromethane	04/28/21	ug/L	20	U	20
L301	Vinyl Acetate	11/15/19	ug/L	50	U	50
L301	Vinyl Acetate	10/25/21	ug/L	50	U	50
L302	Vinyl Acetate	11/11/20	ug/L	30.9	U	30.9
L309	Vinyl Acetate	05/11/20	ug/L	50	U	50
L310	Vinyl Acetate	04/28/21	ug/L	50	U	50
L301	Vinyl Chloride	11/15/19	ug/L	20	U	20
L301	Vinyl Chloride	10/25/21	ug/L	20	U	20
L302	Vinyl Chloride	11/11/20	ug/L	20	U	20
L309	Vinyl Chloride	05/11/20	ug/L	20	U	20
L310	Vinyl Chloride	04/28/21	ug/L	20	U	20
LREP	Vinyl Chloride	11/11/20	ug/L	20	U	20
L301	Xylenes, Total	11/15/19	ug/L	23.4		20
L301	Xylenes, Total	10/25/21	ug/L	57.4		20
L302	Xylenes, Total	11/11/20	ug/L	35.1		20
L309	Xylenes, Total	05/11/20	ug/L	24.2		20
L310	Xylenes, Total	04/28/21	ug/L	54		20
L301	Zinc, Total	11/15/19	ug/L	20	U	20
L301	Zinc, Total	10/25/21	ug/L	948		20
L302	Zinc, Total	11/11/20	ug/L	543		20
L309	Zinc, Total	05/11/20	ug/L	91.2		20
L310	Zinc, Total	04/28/21	ug/L	1,710		23.1

P.2 – Permitted AGQS Values

0978020002 - Lake County
Zion Landfill
Permit No. 1995-343-LFM
Modification No. 155
Log No. 2022-026

ATTACHMENT 1

SHALLOW DRIFT AQUIFER

(Groundwater)

<u>FIELD PARAMETERS</u>	<u>STORETS</u>	<u>MAPC/AGQS</u>
pH	00400	7.13-10.24
Specific Conductance	00094	520.5
Temperature of Water Sample (°F)	00011	-----
Depth to Water (ft. below land surface)	72019	-----
Depth to Water (ft. below measuring point)	72109	-----
Elevation of Measuring Point (Top of casing ft. MSL)	72110	-----
Elevation of Groundwater Surface (ft. MSL)	71993	-----
Elevation of Bottom of Well (ft. MSL)	72020	-----
Ammonia (as Nitrogen; Dissolved) mg/L	00608	0.60
Arsenic (Dissolved) ug/L	01000	6.2
Boron (Dissolved) ug/L	01020	1,985
Cadmium (Dissolved) ug/L	01025	10.0
Chloride (Dissolved) mg/L	00941	18.0
Cyanide (Total) mg/L	00720	10.0
Iron (Dissolved) ug/L	01046	992.0
Lead (Dissolved) ug/L	01049	20.0
Manganese (Dissolved) ug/L	01056	63.0
Mercury (Dissolved) ug/L	71890	0.2
Nitrate (as Nitrogen, Dissolved) mg/L	00618	0.89
Phenols (Total Recoverable) ug/L	32730	63.9
Sulfate (Dissolved) mg/L	00946	166.8
Total Dissolved Solids (TDS, 180°C; Dissolved) mg/L	70300	594.4
Total Organic Carbon (TOC; Total) mg/L	00680	6.3
Zinc (Dissolved) ug/L	01090	32.0

Attachment 1 (Cont.)
(Groundwater)

<u>PARAMETERS</u> (ug/L)	<u>STORETS</u>	<u>MAPC/AGQS</u>
<u>UNFILTERED</u> (totals)		
Acetone	81552	100.0
Acrolein	34210	25.0
Acrylonitrile	34215	200.0
Alachlor	77825	2.0
Aldicarb	39053	3.0
Aldrin	39330	1.0
Aluminum	01105	173078.4
Ammonia (as N) (mg/L)	00610	0.60
Antimony	01097	6.0
Arsenic	01002	7.0
Atrazine	39033	3.0
Barium	01007	248.0
Benzene	34030	5.0
Benzo(a)Pyrene	34247	0.2
Benzoic Acid	77247	100.0
Benzyl Alcohol	77147	10.0
Beryllium	01012	4.0
Beta-BHC	39338	0.05
Bis (chloromethyl) ether	34268	10.0
BOD (mg/L)	00310	9.0
Boron	01022	860.0
Bromobenzene	81555	5.0
Bromochloromethane (chlorobromomethane)	77297	1.0
Bromodichloromethane	32101	5.0
Bromoform (Tribromomethane)	32104	10.0
Bromomethane (Methyl Bromide)	34413	10.0
n-Butylbenzene	77342	5.0
sec-Butylbenzene	77350	5.0
tert-Butylbenzene	77353	5.0
Cadmium	01027	10.0
Calcium (mg/L)	00916	300.0
Carbofuran	81405	40.0
Carbon Disulfide	77041	5.0
Carbon Tetrachloride	32102	5.0
Chemical Oxygen Demand (COD) (mg/L)	00335	92.0
Chlordane	39350	2.0
Chloride (mg/L)	00940	12.0

Attachment 1 (Cont.)
(Groundwater)

<u>PARAMETERS (ug/L)</u>	<u>STORETS</u>	<u>MAPC/AGQS</u>
<u>UNFILTERED (totals)</u>		
Chlorobenzene	34301	5.0
Chloroethane (Ethyl Chloride)	34311	10.0
Chloroform (Trichloromethane)	32106	5.0
Chloromethane (Methyl Chloride)	34418	10.0
o-Chlorotoluene	77275	1.0
p-Chlorotoluene	77277	5.0
Chromium	01034	270.0
Chlorodibromomethane (Dibromochloromethane)	32105	5.0
Cobalt	01037	100.0
Copper	01042	40.0
p-Cresol	77146	10.0
Dalapon	38432	20.0
DDT	39370	10.0
Dibromomethane (Methylene Bromide)	77596	10.0
m-Dichlorobenzene (1,3 Dichlorobenzene)	34566	5.0
o-Dichlorobenzene (1,2 Dichlorobenzene)	34536	10.0
p-Dichlorobenzene (1,4 Dichlorobenzene)	34571	5.0
Dichlorodifluoromethane	34668	5.0
Dichloromethane (Methylene Chloride)	34423	5.0
Dieldrin	39380	10.0
Diethyl Phthalate	34336	10.0
Dimethyl Phthlate	34341	10.0
Di-N-Butyl Phthlate	39110	10.0
Dinoseb (DNBP)	81287	1.0
Endothall	38926	50.0
Endrin	39390	0.2
Di(2-Ethylhexyl)Phthalate	39100	6.0
Ethanol	77004	1000.0
Ethylbenzene	78113	5.0
Ethylene Dibromide (EDB)(1,2-Dibromo ethane)	77651	0.05
Fluoride (mg/L)	00951	1.86
Heptachlor	39410	0.4
Heptachlor Epoxide	39420	0.2
Hexachlorobutadiene	39702	10.0
Hexachlorocyclopentadiene	34386	50.0
Iodomethane (Methyl Iodide)	77424	10.0

Attachment 1 (Cont.)
(Groundwater)

<u>PARAMETERS (ug/L)</u>	<u>STORETS</u>	<u>MAPC/AGQS</u>
<u>UNFILTERED (totals)</u>		
Iron	01045	26058.9
Isophorone	34408	10.0
Isopropylbenzene	77223	5.0
p-Isopropyltoluene	77356	5.0
Lead	01051	136.0
Lindane	39782	0.2
Magnesium (mg/L)	00927	140.0
Manganese	01055	1732.5
Mercury	71900	0.2
Methoxyclor	39480	40.0
Naphthalene	34696	5.0
Nickel	01067	119.0
Nitrate-Nitrogen (mg/L)	00620	0.50
Oil(Hexane-Soluble or Equivalent) (mg/L)	00550 or 00552	14.0
Parathion	39540	10.0
Pentachlorophenol	39032	1.0
Phosphorous	00665	1590.0
Picloram	39720	50.0
Polychlorinated Biphenyls	39516	0.5
Potassium (mg/L)	00937	11.0
n-Butyl alcohol (1-Butanol)	45265	5000.0
n-Propanol	77018	1000.0
n-Propylbenzene	77224	5.0
Selenium	01147	5.0
Silver	01077	50.0
Simazine	39055	2.0
Sodium (mg/L)	00929	110.0
Styrene	77128	10.0
Sulfate (mg/L)	00945	90.0
Tetrachloroethylene (Perchloroethylene)	34475	5.0
Tetrahydrofuran	81607	20.0
Thallium	01059	9.2
Toluene	34010	5.0
Toxaphene	39400	3.0
Trichloroethylene (Trichloroethene)	39180	5.0
Trichlorofluoromethane	34488	5.0

Attachment 1 (Cont.)
(Groundwater)

<u>PARAMETERS</u> (ug/L)	<u>STORETS</u>	<u>MAPC/AGQS</u>
<u>UNFILTERED</u> (totals)		
Vanadium	01087	75.0
Vinyl Chloride	39175	2.0
Vinyl Acetate	77057	10.0
Xylenes	81551	10.0
m-Xylene	77134	10.0
o-Xylene	77135	10.0
p-Xylene	77133	10.0
Zinc	01092	144.5
1,1,1,2-Tetrachloroethane	77562	5.0
1,1,1-Trichloroethane (Methylchloroform)	34506	5.0
1,1,2,2-Tetrachloroethane	34516	10.0
1,1,2-Trichloroethane	34511	5.0
1,1-Dichloroethane	34496	5.0
1,1-Dichloroethylene	34501	5.0
1,1-Dichloropropene	77168	5.0
1,2,3-Trichlorobenzene	77613	5.0
1,2,3-Trichloropropane	77443	15.0
1,2,4-Trichlorobenzene	34551	10.0
1,2,4-Trimethylbenzene	77222	5.0
1,2-Dibromo-3-Chloropropane (DBCP)	38760	25.0
cis-1,2-Dichloroethylene	77093	5.0
trans-1,2-Dichloroethylene	34546	1.0
1,2-Dichloroethane	34531	5.0
1,2-Dichloropropane (Propylene Dichloride)	34541	5.0
1,3,5-Trimethylbenzene	77226	5.0
1,3-Dichloropropane	77173	5.0
1,3-Dichloropropene	34561	5.0
cis-1,3-Dichloropropene	34704	10.0
trans-1,3-Dichloropropene	34699	10.0
trans-1,4-Dichloro-2-Butene	73547	5.0
2-chloroethyl vinyl ether	34576	8.8
2,2-Dichloropropane	77170	15.0
2,4,5-TP (Silvex)	39760	2.0
2,4-Dichlorophenoxyacetic Acid (2,4-D)	39730	10.0
2-Butanone(Methyl Ethyl Ketone)	81595	10.0
2-Hexanone (Methyl Butyl Ketone)	77103	50.0
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	78133	50.0

Attachment 1 (Cont.)
(Groundwater)

<u>PARAMETERS</u> (ug/L)	<u>STORETS</u>	<u>MAPC/AGQS</u>
<u>UNFILTERED</u> (totals)		
2-Propanol	81310	1000.0

INTRATILL SORTED SEDIMENTS
(Groundwater)

<u>FIELD PARAMETERS</u>	<u>STORETS</u>	<u>MAPC</u>	<u>AGQS</u>
pH	00400	6.67-8.64	6.67-8.64
Specific Conductance	00094		
Temperature of Water Sample (°F)	00011	----	----
Depth to Water (ft. below land surface)	72019	----	----
Depth to Water (ft. below measuring point)	72109	----	----
Elevation of Measuring Point (Top of casing ft. MSL)	72110	----	----
Elevation of Groundwater Surface (ft. MSL)	71993	----	----
Elevation of Bottom of Well (ft. MSL)	72020	----	----

<u>FIELD PARAMETERS</u>	<u>STORETS</u>	<u>MAPC</u>	<u>AGQS</u>
Ammonia (as Nitrogen; Dissolved) mg/L	00608	2.86	0.60
Arsenic (Dissolved) ug/L	01000	15.95	15.70
Boron (Dissolved) ug/L	01020	2,649.0	2,623.0
Cadmium (Dissolved) ug/L	01025	10.80	10.0
Chloride (Dissolved) mg/L	00941	37.79	30.0
Chromium (Dissolved) ug/L	01030	10.1	10
Cyanide (Total) mg/L	00720	10.12	10.0
Iron (Dissolved) ug/L	01046	3,675.0	1,121.0
Lead (Dissolved) ug/L	01049	62.87	60.0
Magnesium (Dissolved) mg/L	00925	185.6	183
Manganese (Dissolved) ug/L	01056	248.0	149.0
Mercury (Dissolved) ug/L	71890	0.20	0.20
Nitrate (as Nitrogen, Dissolved) mg/L	00618	22.58	22.40
Phenols (Total Recoverable) ug/L	32730	35.9	35.9
Sulfate (Dissolved) mg/L	00946	509.6	507.8
Total Dissolved Solids (TDS, 180°C; Dissolved) mg/L	70300	1,393.9	1,386.1
Total Organic Carbon (TOC; Total) mg/L	00680	5.3	5.3
Zinc (Dissolved) ug/L	01090	1330.21	32.0

Attachment 2

Site Name: Zion Landfill
Site Number: 0978020002

IEPA Permit No: 1995-343-LFM
Permit Log No: 2022-026

Intrawell Value Table

Parameter	STORET	Monitoring Wells									
		C129	G131	G132	G160	G161	G162	G163	G164	G165	
Field Parameters											
pH	00400	--	--	--	--	--	--	--	6.57 - 7.86	--	
Specific Conductance (umhos/cm)	00094	1,194	295.2	--	722.2	913.0	1,035.4	861.2	1,463.4	833.0	
Indicator Parameters											
Boron (Dissolved) ug/L	01020	--	2,111.0	1,879.0	1,446.8	709.7	601.1	673.6	660.0	574.0	
Chromium (Dissolved) ug/L	01030	10	10	10	10	10	10	10	10	10	
Magnesium (Dissolved) mg/L	00925	163	3.5	3.5	48.2	76.6	72	51.2	65.6	63.3	
Manganese (Dissolved) ug/L	01056	--	--	--	--	--	--	--	671.7	197.0	
Sulfate (Dissolved) mg/L	00946	728.8	210.0	--	323	331.4	346.4	348.7	537.5	286.8	
Total Dissolved Solids (TDS) mg/L	70300	742.9	328.4	--	562.2	683.3	773.6	612.2	1,111.5	575.0	
Unfiltered Parameters											
Boron (Total) ug/L	01022	925.0	2,007.0	2,366.0	924.0	800.0	681.0	811.0	757.0	707.0	
Sulfate (Total) mg/L	00945	580.9	28.2	33.3	230.0	370.7	300.0	301.1	300.0	242.4	
Parameter	STORET	Monitoring Wells									
		G166	G167	G176	G177	G178	G179	G180	G181	G182	
Field Parameters											
pH	00400	--	--	--	--	--	--	--	--	--	
Specific Conductance (umhos/cm)	00094	1,690.0	638.0	464.0	398.7	395.2	576.2	318.2	366.9	676.9	
Indicator Parameters											
Boron (Dissolved) ug/L	01020	914.0	684.0	727.0	701.8	3,771.5	691.8	1,760.5	1,000.0	2,950.3	
Sulfate (Dissolved) mg/L	00946	322.5	69.5	50.1	30.0	22.3	73.3	140.0	21.0	122.8	
Total Dissolved Solids (TDS) mg/L	70300	1,063.3	501.2	301.8	335.9	272.2	362.9	262.2	284.4	472.8	
Unfiltered Parameters											
Boron (Total) ug/L	01022	825.0	751.0	769.0	860.0	2,871.0	854.0	1,061.0	1,379.0	1,200.0	
Sulfate (Total) mg/L	00945	354.5	112.3	49.8	34.5	50.7	41.1	31.7	20.7	52.0	

Attachment 2 (Cont.)

Site Name:
Site Number:

Zion Landfill
0978020002

IEPA Permit No:
Permit Log No:

1995-343-LFM
2022-026

Intrawell Value Table

Parameter	STORET	Monitoring Wells									
		G183	G184	G185	G186	G187	G188	G191	G193	R124	
		Field Parameters									
pH	00400	--	--	--	--	--	--	--	--	--	
Specific Conductance (umhos/cm)	00094	466.0	315.3	333.2	489.0	276.0	369.7	501.0	257.0	789.7	
Indicator Parameters											
Boron (Dissolved) ug/L	01020	712.2	1,246.6	740.7	582.9	830.5	641.5	727.0	879.7	750.1	
Sulfate (Dissolved) mg/L	00946	55.2	22.2	10.7	93.2	14.0	9.7	64.6	21.6	291.5	
Total Dissolved Solids (TDS) mg/L	70300	240.0	314.4	253.7	336.1	252.2	312.2	391.4	843.6	568.6	
Unfiltered Parameters											
Boron (Total) ug/L	01022	790.0	3,359.0	814.0	--	--	--	608.0	1,735.0	909.0	
Sulfate (Total) mg/L	00945	69.8	42.8	44.8	--	--	--	59.0	28.8	286.1	

Parameter		STORET	Monitoring Wells					
Field Parameters			R126	R128	G132	R133	T001	T002
pH		00400	--	--	--	--	--	--
Specific Conductance (umhos/cm)		00094	2,554.9	466.0	278.7	354.9	488.0	488.0
Indicator Parameters								
Boron (Dissolved) ug/L		01020	992.2	852.7	1,139.6	920.1	643.0	669.0
Manganese (Dissolved) ug/L		01056	454.4	--	--	--	--	--
Sulfate (Dissolved) mg/L		00946	1,400.0	90.4	26.2	36.6	53.3	50.4
Total Dissolved Solids (TDS) mg/L		70300	2,000.0	281.8	284.4	503.8	338.2	260.0
Unfiltered Parameters								
Boron (Total) ug/L		01022	1,621.0	894.0	--	1,121.0	674.0	--
Sulfate (Total) mg/L		00945	1,400.0	115.1	--	22.0	55.0	--

Attachment 2 (Cont.)

Site Name:
Site Number:

Zion Landfill
0978020002

IEPA Permit No:
Permit Log No:

1995-343-LFM
2022-026

Intrawell Value Table

Parameter	STORET	Monitoring Wells									
		G167	G168	G169	G175	G176	G177	G178	G179	G180	
Field Parameters											
pH	00400	--	--	--	--	--	--	--	--	--	
Specific Conductance (umhos/cm)	00094	--	637	484	2239	--	--	--	--	--	
Indicator Parameters											
Boron (Dissolved) ug/L	01020	--	601	649	1369	--	--	--	--	--	
Chromium (Dissolved) ug/L	01030	10	10	10	10	10	10	10	10	10	
Magnesium (Dissolved) mg/L	00925	31.3	21.6	19.7	34.6	17.6	25.3	8.1	38	7.6	
Sulfate (Dissolved) mg/L	00946	--	232.5	55.5	812.8	--	--	--	--	--	
Total Dissolved Solids (TDS) mg/L	70300	--	668.4	415.9	1533	--	--	--	--	--	
Monitoring Wells											
Parameter	STORET	G181	G183	G184	G185	G191	R124	R126	R128	R133	
Field Parameters											
pH	00400	--	--	--	--	--	--	--	--	--	
Specific Conductance (umhos/cm)	00094	--	--	--	--	--	--	--	--	--	
Indicator Parameters											
Boron (Dissolved) ug/L	01020	--	--	--	--	--	--	--	--	--	
Chromium (Dissolved) ug/L	01030	10	10	10	10	10	10	10	10	10	
Magnesium (Dissolved) mg/L	00925	6.5	22.5	5.1	11.8	36.9	82.1	340.9	8.7	3.9	
Sulfate (Dissolved) mg/L	00946	--	--	--	--	--	--	--	--	--	
Total Dissolved Solids (TDS) mg/L	70300	--	--	--	--	--	--	--	--	--	

Attachment 2 (Cont.)

Site Name:
Site Number:

Zion Landfill
0978020002

IEPA Permit No:
Permit Log No:

1995-343-LFM
2022-026

Intrawell Value Table

Parameter	STORET	Monitoring Wells									
		R166	R182	R193	T003	T004	G170	T005	T006	--	
Field Parameters											
pH	00400	--	--	--	--	--	--	--	--	--	--
Specific Conductance (umhos/cm)	00094	--	--	--	555	834	799	--	--	--	--
Indicator Parameters											
Boron (Dissolved) ug/L	01020	--	--	--	615	660	--	--	--	--	--
Chromium (Dissolved) ug/L	01030	10	10	10	10	10	10	10	10	10	--
Magnesium (Dissolved) mg/L	00925	44.6	48.7	5.8	25.9	36.4	34.5	10.9	19.5	--	--
Sulfate (Dissolved) mg/L	00946	--	--	--	71.8	212.5	--	--	--	--	--
Total Dissolved Solids (TDS) mg/L	70300	--	--	--	373.9	421.3	--	--	--	--	--
Parameter	STORET	GG2S	RE2S	G201	G202	G203	G204	G205	G206	GF7S	
Monitoring Wells											
Field Parameters											
pH	00400	--	--	--	--	--	--	--	--	--	--
Specific Conductance (umhos/cm)	00094	--	--	--	--	--	--	--	--	--	--
Indicator Parameters											
Boron (Dissolved) ug/L	01020	4,616	--	--	--	--	--	--	--	--	--
Chloride (Dissolved) mg/L	00941	--	174	--	--	--	--	--	--	268	--
Chromium (Dissolved) ug/L	01030	--	--	10	10	10	10	10	10	--	--
Magnesium (Dissolved) mg/L	00925	--	--	19.4	20.3	19.5	17.3	17	18.5	--	--
Sulfate (Dissolved) mg/L	00946	--	--	--	--	--	--	--	--	1003	--
Total Dissolved Solids (TDS) mg/L	70300	--	--	--	--	--	--	--	--	1935	--
Boron (Total) ug/L	01022	4,095	--	--	--	--	--	--	--	--	--
Potassium (Total) mg/L	00937	6.56	--	--	--	--	--	--	--	--	--
Chloride (Total) mg/L	00940	--	184	--	--	--	--	--	--	--	295
Sodium (Total) mg/L	00929	130	--	--	--	--	--	--	--	--	--
Sulfate (Total) mg/L	00945	--	--	--	--	--	--	--	--	--	1030

Attachment 2 (Cont.)

Site Name:
Site Number:

Zion Landfill
0978020002

IEPA Permit No:
Permit Log No:

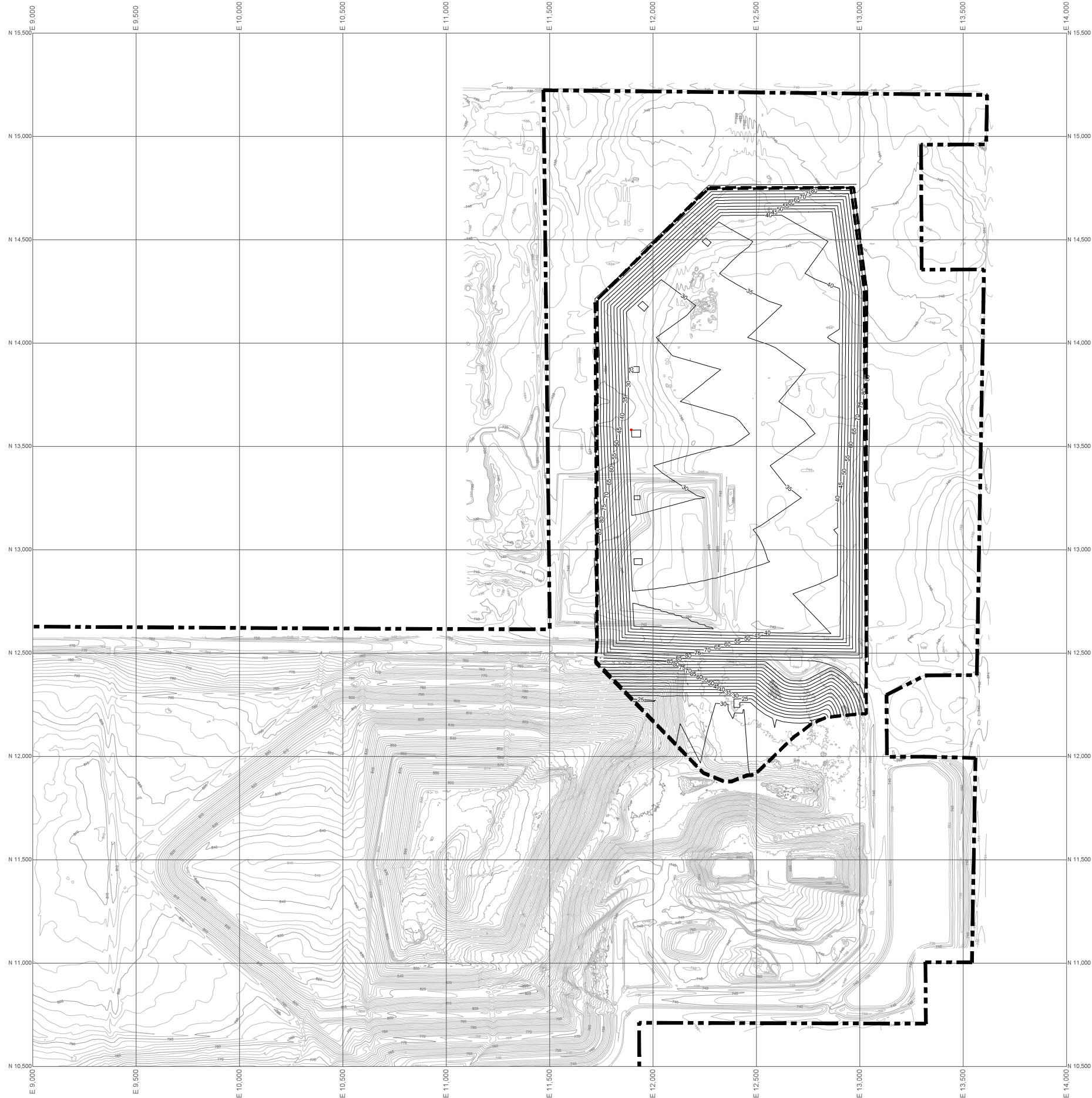
1995-343-LFM
2022-026

Intrawell Value Table

Parameter	STORET	Monitoring Wells		
		G207	G208	G209
Field Parameters				
pH	00400	--	--	--
Specific Conductance (umhos/cm)	00094	--	--	--
Indicator Parameters				
Boron (Dissolved) ug/L	01020	--	--	--
Chromium (Dissolved) ug/L	01030	10	10	10
Magnesium (Dissolved) mg/L	00925	16.9	20.7	16.4
Sulfate (Dissolved) mg/L	00946	--	--	--
Total Dissolved Solids (TDS) mg/L	70300	--	--	--

P.3 – Model Input Documentation

Thickness of Wadsworth Formation/Till below Excavation Grades



LEGEND

- APPROXIMATE PROPOSED FACILITY BOUNDARY
- .-.- APPROXIMATE PROPOSED EXPANSION WASTE BOUNDARY
- 30 — INTERPOLATED THICKNESS CONTOUR

NOTES

- EXISTING CONTOURS DEVELOPED FROM SITE AERIAL TOPOGRAPHIC SURVEY BY CQM ON 10/22/2018.
- FOR CLARITY, NOT ALL SITE FEATURES MAY BE SHOWN.
- CURRENT TOPOGRAPHY MAY DIFFER FROM THAT SHOWN.
- THICKNESS OF WADSWORTH TILL BELOW EXCAVATION GRADES DEVELOPED FROM COMPARING THE DESIGN BOTTOM OF LINER/EXCAVATION AND THE TOP ELEVATION OF SHALLOW DRIFT SURFACE.
- THICKNESS OF WADSWORTH TILL UNDER LINER FLOOR (EXCLUDES SIDESLOPES)
MINIMUM THICKNESS = 19.7'
MAXIMUM THICKNESS = 43.6'
AVERAGE THICKNESS = 33.7'

REV. NO.	DATE	DESCRIPTION



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ZION LANDFILL - SITE 2 NORTH EXPANSION
CITY OF ZION, ILLINOIS

DRAWING 1
THICKNESS OF WADSWORTH TILL
BELOW BASE EXCAVATION GRADES

PROJ. NO.: 631020105	DATE: AUGUST 2021
DESIGNED BY: DAM	DRAWING NO.
DRAWN BY: NV	1
CHECKED BY: MNF	1 OF 1 SHEETS
APPROVED BY: DAM	

Vertical Seepage Calculation



Title: Giroud et al. Calculation

Client: GFL Everglades Holdings, LLC
 Project: Site 2 North Expansion
 Calculated By: LYN
 Checked By: DJD

Date: 4/3/2020

Date: 4/3/2020

Problem Statement

Calculate outward leakage through the composite liner design based on Giroud et al. (1989).

Given

- 1 Outward gradient with 1 foot of differential head acting on the liner during operational and post-closure periods.
- 2 Poor contact between the geomembrane and the compacted soil liner (CSL) is conservatively assumed.
- 3 Illinois Environmental Protection Agency (IEPA) accepted geomembrane defect area of 4 cm² per acre.

Solution

The volumetric rate of leakage through geomembrane defect (Q) expressed in m³/s/acre =

$$Q = 1.15 h w^{0.9} a^{0.1} k_s^{0.74} \quad \text{Giroud et al. (1989)}$$

Where,

hw = Differential head acting on top of the composite liner

a = Area of the geomembrane defect

ks = Saturated hydraulic conductivity of the CSL

Q = Volumetric rate of leakage = $1.15 h w^{0.9} a^{0.1} k_s^{0.74}$

q_v = Vertical leakage rate in m/s = (Q/1 acre/4047 m²)

- 1) 1 foot of differential head on CSL (1 E-07 cm/s).

hw = Differential head acting on the composite liner = 1.0 ft = 0.3048 m

a = Area of the geomembrane defect = 4.00 cm²/acre = 0.0004 m²/acre

ks = Saturated hydraulic conductivity of the CSL = 1E-07 cm/s = 1E-09 m/s

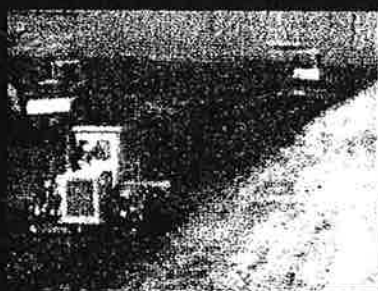
Q = Volumetric rate of leakage = $1.15 h w^{0.9} a^{0.1} k_s^{0.74}$ = 3.95E-08 m³/s/acre

q_v = Vertical leakage rate in m/s = (Q/1 acre/4047 m²) = 9.76E-12 m/s = **3.08E-04 m/y**

Reference

Giroud, J.P., A. Khatami, and K. Badu-Tweneboah. Geotextiles and Geomembranes, Vol. 8, 1989, pp. 337 - 340.

Diffusion Coefficient Documentation



BARRIER SYSTEMS FOR WASTE DISPOSAL FACILITIES

2ND EDITION

R. Kerry Rowe, Robert M. Quigley,
Richard W.I. Brachman & John R. Booker

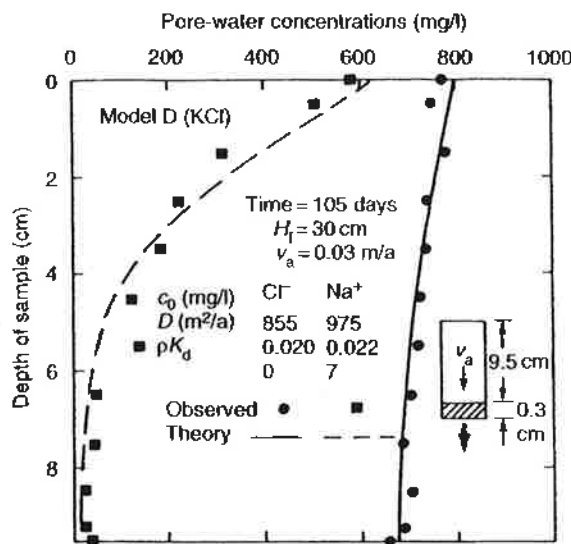


Figure 8.10 Chloride and potassium concentration versus depth in sample for model D (modified from Rowe *et al.*, 1988).

variation in concentration with depth in the soil at the end of each test. The consistency of results demonstrates the power of the analytical model (program POLLUTE) and provides some con-

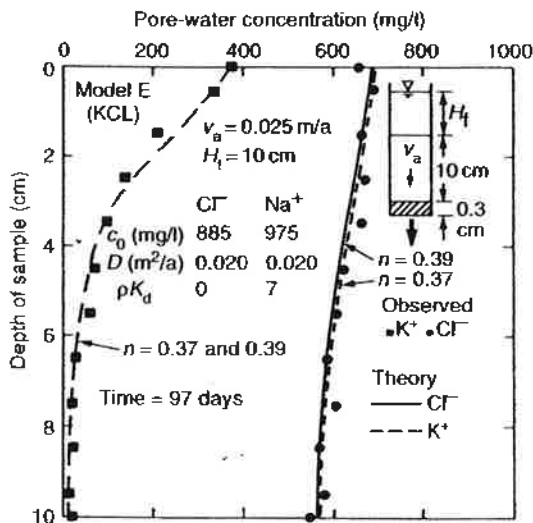


Figure 8.11 Chloride and potassium concentration versus depth in sample for model E (modified from Rowe *et al.*, 1988).

fidence in the parameters D and ρK_d for the clay and source fluids examined.

To provide an indication of parameter variation that might be expected for a given soil, a number of tests were duplicated. The diffusion coefficient, D , for chloride was deduced for each model and ranged between 0.018 and $0.02 \text{ m}^2/\text{a}$ with an average value of $0.019 \text{ m}^2/\text{a}$. This small variation in D does not appear to be related to small differences in Darcy velocity, nor does it appear to be particularly related to the nature of the associated cation (see Table 8.3). Rather, the variability from 0.018 to $0.02 \text{ m}^2/\text{a}$ is seen as an indication of the level of repeatability that may be achieved for this type of test.

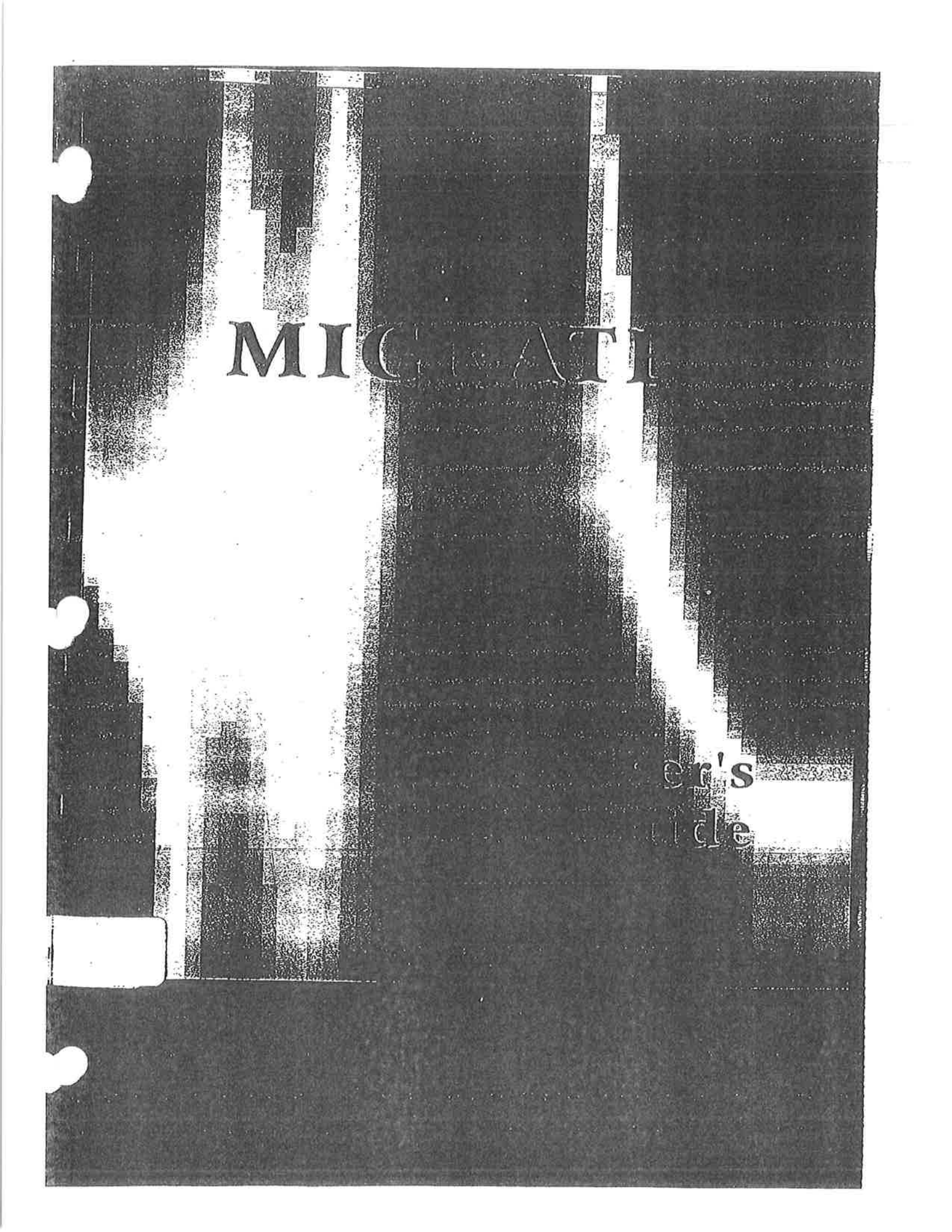
The application of an effective stress to the soil sample adopted in these tests is not an essential part of the proposed technique for determining the parameters D and K_d . Tests performed for the particular combination of clay and permeants considered herein gave similar results both with and without the application of the effective stress. However, for some combinations of clay and permeant, shrinkage of the clay may occur in the absence of a confining stress and this can give quite misleading results (e.g., see Quigley and Fernandez, 1989). For these clays, and for GCLs (see Chapter 12), tests should be performed at an effective stress similar to that anticipated in the field.

8.3.2 Pure diffusion tests

In many cases, it is not necessary to perform an advection-diffusion test. Under these circumstances, a simple diffusion test can be performed for boundary conditions shown in Figure 8.2. In this test, the soil sample is placed in a Plexiglass cylinder by trimming the sample to a size marginally greater than the specimen and then pressing the specimen into the cylinder, using a cutting shoe attached to the cylinder, to perform the final trim. This procedure is found to work well for many clays. However, it does not work well for clays with a significant stone content because the

*
0.019
 m^2/y

Porosity Documentation



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Guide

Sublayers The number of sublayers in each layer is primarily used in the output of the calculated concentrations with depth; a concentration will be calculated at each sublayer interface.

The maximum thickness of each sublayer is 5 units. The number of sublayers is automatically increased if required to keep their thickness to less than 5. For example, if the layer thickness was 50 m and it had 5 sublayers (giving a sublayer thickness of 10), the program will automatically adjust the number of sublayers to 10.

If the time-varying properties is selected, the accuracy of the results will depend on the number of sublayers.

Thickness The thickness of the layer must be specified, this is the total thickness of all the sublayers in the layer.

Dry Density The dry density of the layer, expressed in consistent units with those used throughout the model.

Porosity This is the porosity of the layer, which must be greater than 0 and less than or equal to 1. If the layer is being used to represent a geomembrane the porosity should be set to 1.

Horizontal & Vertical Diffusion/Dispersion Coefficients

These are the horizontal and vertical coefficients of hydrodynamic dispersion for the layer:

$$D_{xx} = D_m + D_{mch}$$

$$D_{zz} = D_m + D_{mch}$$

where,

D_m and D_m = diffusion coefficients for the species,
 D_{mch} and D_{mch} = coefficients of mechanical dispersion.

For intact clayey layers, diffusion will usually be the controlling factor and dispersion will often be negligible [Gillham and Cherry, 1982, Rowe, 1987]. In sandy layers, dispersion will tend to be the controlling factor.

Horizontal and Vertical Darcy Velocities

$$V_{ax} = nv_x$$

$$V_{az} = nv_z$$

where,

n = effective porosity,
 v_x and v_z = seepage or groundwater velocities.

Distribution Coefficient

This is the distribution coefficient for the layer. The sorption-desorption of a non-conservative species of contaminant is assumed to be linear such that:

$$S = K_d * c$$

where,

S = solute sorbed per unit weight of soil,
 K_d = distribution (partitioning) coefficient,
 c = concentration of contaminant.

This is a reasonable approximation for low concentrations of contaminant, however at high concentrations sorption may not be linear and more complex relationships should be used. If there is no sorption (i.e., a conservative species) the distribution coefficient is zero.

Half-Life

If the contaminant species experiences radioactive or biologic decay in a layer, this option can be used to specify the half-life of the species in the layer. First order (exponential) decay is assumed for both radioactive and biological decay, eg.

$$c(t) = c(0) e^{-\lambda t}$$

where,

$c(t)$ = concentration at time t ,
 $c(0)$ = initial concentration,
 λ = decay constant = $0.693147/\text{half-life}$,

If there is no decay of the species in the layer, the half-life should be specified as zero which is the same as an infinite half-life ($\lambda = 0$).

POROSITY
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HDPE

STANDARD HANDBOOK for SOLID and HAZARDOUS WASTE FACILITY ASSESSMENTS



Martin N. Sara

STANDARD HANDBOOK for SOLID and HAZARDOUS WASTE FACILITY ASSESSMENTS

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read directly off the various density hydraulic conductivity graphs (see Figure 5-36). The uniformity coefficient (C_u) is defined as the ratio of the D_{60} size of the soil (the size than which 60% of the soil is finer) to the D_{10} .

The above can be used where appropriate, to support field tests of hydraulic conductivity. Building an adequate data base of both field and laboratory hydraulic conductivity tests then provides the basis for definition of vertical and horizontal components of hydraulic conductivity in later flow net constructions.

5.6.7 Laboratory Tests For Effective Porosity

An important aquifer characteristic of geologic environments used in time of travel calculations, is effective porosity. Fetter (1980) defines effective porosity as follows: "The amount of interconnected pore space through which fluids can pass, expressed as a percent of bulk volume. Part of the total porosity will be occupied by static fluid being held to the mineral surface by surface tension, so effective porosity will be less than total porosity." The relative value of effective porosity for fine grained sediments such as clays has been the point of significant disagreements between regulatory agencies and

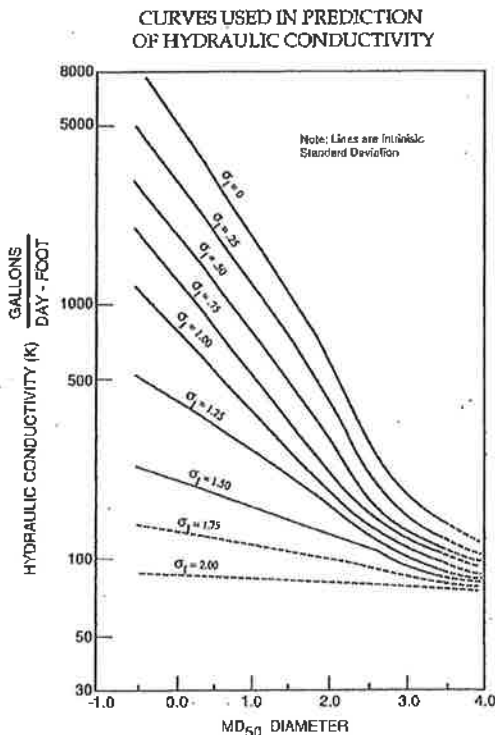
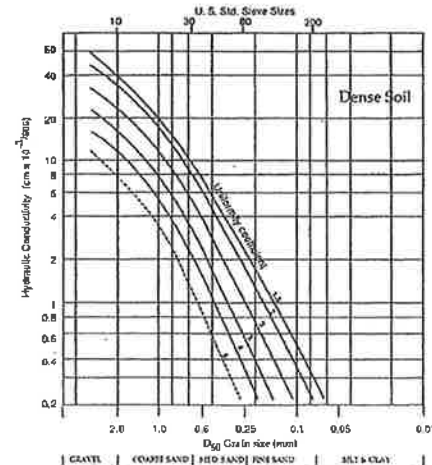
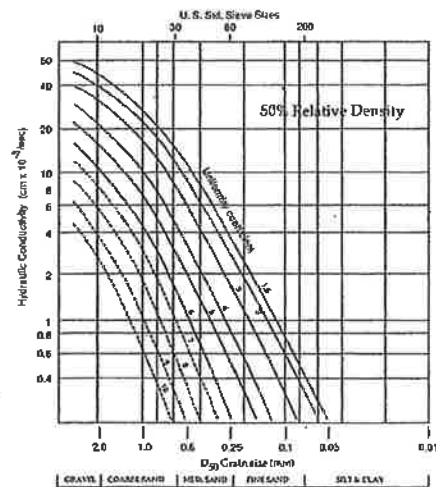
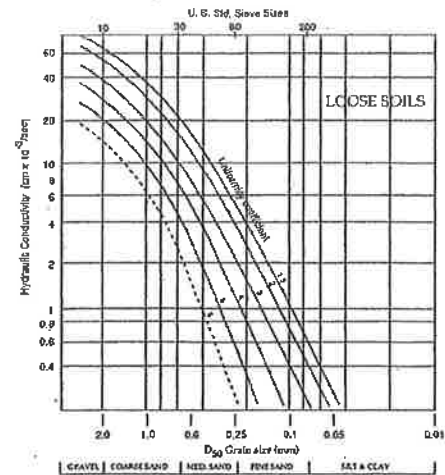


Figure 5-35 Masch and Denny Curves



Source: Modified from Powers(1981)

Figure 5-36 Powers Curves for Density and K

the regulated community for a number of years since effective porosity is used in the following equation of seepage velocity:

$$V = \frac{Ki}{n_e} \quad \text{Equation 5-39}$$

V is the average lineal velocity;

n_e is the effective porosity.

i is the gradient, and K is hydraulic conductivity.

There is a current controversy centering around using very low values of n_e for fine grained clay sediments. A U.S. EPA guidance document (EPA 1986) proposed using values of effective porosity on the level of 1% for clays. The basis of this low figure is from specific yield determinations of sediments derived from water supply literature (see Walton 1970, p. 34). However, the Glossary of Geology (1987) defines effective porosity as follows: "The percentage of the total volume of a given mass of soil or rock that consists of interconnected interstices. The use of this term as a syn. of specific yield is to be 'discouraged.'" The definition of effective porosity is recognized as not synonymous with specific yield in the technical literature. This departure of n_e from specific yield is especially important in fine grained sediments, since the value of lineal velocity V is so dependent on effective porosity. For example, using a low effective porosity of 1% (as compared to 30%) for a clay confining unit, will change the calculations of lineal velocity as follows:

Assuming $K = 1 \times 10^{-7}$ cm/sec

$i = dh/dl = 0.5$

$n_e = 0.01, 0.30$

1.57 m/year (at 0.01 n_e)

0.053 m/year (at 0.30 n_e)

Considering the average facility can have thirty years of active life the difference in the two calculations can represent the difference between breaking through confining units some thirty times faster than with the larger value of n_e . The controversy surrounding n_e is difficult, in some ways to understand on a scientific basis, considering effective porosity can be calculated from breakthrough column tests. The following test is described for quantification of n_e for a series of glacial till (confining unit) samples. This testing was performed to: 1) determine the effective transport porosity; and, 2) to allow evaluation of the effect of leachate on the hydraulic conductivity of these potential clay liner materials. These results can ultimately be used in design of recompacted clay liners for

future hazardous waste disposal cells at a potential site, and can be used to estimate effective porosity of unfractured confining unit materials.

A testing program should include both hydraulic conductivity testing and saline solution breakthrough evaluation of a number of confining unit samples. In addition, one should also conduct several reverse breakthrough tests using fresh water as the permeant.

Breakthrough and Leachate Solutions

The initial stages of laboratory tests for specific porosity, including saturation and hydraulic conductivity determination, should be conducted using actual site water obtained during the site assessment investigation.

An example tracer solution used for the column breakthrough portion of the tests consisted of a lithium chloride salt in water. The concentrations of lithium and chloride in the breakthrough tracer solution for the example below were:

- Lithium: 4,800 mg/l
- Chloride: 25,000 mg/l

Experience with the initial portion of column breakthrough testing shows that one will observe that the chloride ions will pass through soil samples at a much faster rate than the lithium ions. The likely reason is that due to cation exchange effects within the clay particles slowed down the passage of the lithium ions. The variation of the observed chloride concentration with time is considered to be the more accurate indicator of breakthrough time and, hence, pore fluid velocity. Therefore, only chloride ion concentrations is measured for the reverse breakthrough tests to maintain a conservative approach to the testing program.

The tracer solution is placed into a tri-axial cell upgradient accumulator (see Figure 5-33) and the concentration of lithium and chloride is then measured in the fluid that permeates out of the sample and is collected in the downgradient accumulator. During the initial portion of the test a gradient of 5 pounds per square inch (psi) is imposed on the sample. One may find with low hydraulic conductivity geologic test materials there is a resistant low flow rate, therefore, the gradient may be increased later in the test program to 10 psi. During the breakthrough portion of the test, at least 2 pore volumes of fluid should be passed through the sample.

Determination of Effective Porosity

Based on the principles of Darcian flow, the velocity

(v) of a soluble constituent flowing through a porous medium can be estimated using the Equation 5-39:

$$v = Ki/n_e$$

where:

K is the hydraulic conductivity;

i = the hydraulic gradient, and,

n_e = the effective porosity.

For the purposes of calculating breakthrough velocity, breakthrough is defined as the point where the constituent concentration in the permeant leaving the sample is fifty percent of that entering the sample. The effective porosity is the porosity through which flow is actually occurring. As such, it is always less than or equal to the total porosity. The incorporation of effective porosity into the Darcy equation, then, takes into account bound water and closed voids within the sample.

Since it is typical for effective porosity samples under going testing have different values for hydraulic conductivity, it would be considered appropriate to examine the change in concentration of the constituent being measured in the permeant (in this case, chloride) leaving the sample in terms of the number of pore volumes of fluid passing through the sample. Since these small samples are relatively homogeneous, the ratio of the effective porosity to the total porosity is equal to the number of pore volumes passing through the sample at breakthrough. Values of effective porosity based on this method of analysis are shown in Table 5-9. The effective porosity obtained in the test series for glacial tills ranged from 0.26 to 0.34. (Golder 1987)

These values can be compared with work performed by Rawls, Brakensiek & Saxton (1982) on 1,323 soils with 5,350 horizons from 32 states that provided the total porosity, residual saturation, and effective porosity (among other soil properties) for this large spectrum of soil tests. Table 5-10 shows effective porosity for clay at 38.5%. This value is consistent with column tests performed in site investigations for clays.

5.6.8 Laboratory Hydraulic Properties Of Rocks

Samples for laboratory testing should be selected from available cores, and should be representative of site bedrock geologic units. Where possible, horizontal and vertical plugs of 25 mm diameter should be cut from drilled rock cores of 50–100 mm diameter. However, if the sample is friable and subject to breakup in handling, testing it may not be possible to measure hydraulic conductivity. The engineer should keep in mind that such laboratory

Table 5-9 Summary of Effective Porosity Results

Sample	Porosity	Pore Volumes at Breakthrough	Effective Porosity
TP-1	0.38	1.05	0.29
TP-3	0.38	0.68	0.26
TP-5	0.39	0.88	0.34
TP-9	0.38	0.88	0.33

procedures represent tests on core that is essentially so disturbed in terms of preservation of open discontinuities as to be of limited actual value.

Hydraulic Conductivity

The hydraulic conductivity of rock plugs can be measured in a standard gas permeameter, with nitrogen as the test fluid (API, 1966), with results empirically corrected for gas slippage and expressed for water at 20°C (approximate ground-water temperature in the field).

Effective Porosity, Bulk, and Matrix Density

The rock plugs or sample fragments may then be tested by the liquid resaturation method, employing propanol as the test fluid (API, 1966) in order to avoid a swelling reaction with any altered clayey materials, a situation that would lead to erroneous permeability determinations.

Pore-Size Distribution and Specific Yield

If the rock has exceptional porosity, further laboratory measurements can be undertaken on a smaller number of selected samples to investigate the distribution of pore-sizes and gravity-drainage characteristics.

When dealing with friable rock, the preferred method is by mercury injection porosimeter (Fatt, 1956). This technique involves forcing mercury into the pore spaces of the sample, progressively smaller pore necks being invaded at successively higher pressures, generating a curve of invaded pore-volume against injection-pressure.

The curves should be examined in detail to determine if an incomplete invasion of mercury has occurred. This could result from one of two reasons: either there exist many pores that are too small to be invaded, or some of the

TABLE 5-10 Porosity, Residual Saturation, and Effective Porosity of Common Soils

Texture Class	Sample Size	Total Porosity (ϕ), cm ³ /cm ³	Residual Saturation (ϕ_r), cm ³ /cm ³	Effective Porosity (ϕ_e), cm ³ /cm ³
Sand	762	0.437 (0.374: 0.500)	0.020 (0.001: 0.039)	0.417 (0.354: 0.480)
Loamy Sand	338	0.437 (0.368: 0.506)	0.035 (0.003: 0.067)	0.401 (0.329: 0.473)
Sandy Loam	666	0.453 (0.351: 0.555)	0.041 (0.0: 0.106)	0.412 (0.283: 0.541)
Loam	383	0.463 (0.375: 0.551)	0.027 (0.0: 0.074)	0.434 (0.334: 0.534)
Silt Loam	1206	0.501 (0.420: 0.582)	0.015 (0.0: 0.058)	0.486 (0.394: 0.578)
Sandy Clay Loam	498	0.398 (0.332: 0.464)	0.068 (0.0: 0.137)	0.330 (0.235: 0.425)
Clay Loam	366	0.464 (0.409: 0.519)	0.076 (0.0: 0.174)	0.390 (0.279: 0.501)
Silty Clay Loam	689	0.471 (0.428: 0.524)	0.040 (0.0: 0.118)	0.432 (0.347: 0.517)
Sandy Clay	45	0.430 (0.370: 0.490)	0.109 (0.0: 0.205)	0.321 (0.207: 0.435)
Silty Clay	127	0.479 (0.425: 0.533)	0.056 (0.0: 0.136)	0.423 (0.334: 0.512)
Clay	291	0.475 (0.427: 0.523)	0.090 (0.0: 0.195)	0.385 (0.269: 0.501)

**First line is the mean value

Second line is + one standard deviation about the mean

Reference: Rawls, W.J., D.C. Brakensiek, K.E. Saxton 1982
Transactions of the ASCE Soil & Water Division Paper 81-2510, pp. 1318

Effective Porosities by Soil Type from SARA 1994

Texture Class	Sample Size	Total Porosity	Residual Saturation	Effective Porosity	Percentage Difference Between Total Porosity and Effective Porosity
Sand	762	0.437	0.02	0.417	0.046
Loamy Sand	338	0.437	0.035	0.401	0.082
Sandy Loam	666	0.453	0.041	0.412	0.091
Loam	383	0.463	0.027	0.434	0.063
Silt Loam	1206	0.501	0.015	0.486	0.03
Sandy Clay Loam	498	0.398	0.068	0.33	0.171
Clay Loam	366	0.464	0.076	0.39	0.159
Silty Clay Loam	689	0.471	0.04	0.432	0.083
Sandy Clay	45	0.43	0.109	0.321	0.253
Silty Clay	127	0.479	0.056	0.423	0.117
Clay	291	0.475	0.09	0.385	0.189

TABLE 1 ZION LANDFILL SITE 2 NORTH EXPANSION SUMMARY OF GEOTECHNICAL LABORATORY TEST RESULTS FOR WADSWORTH TILL																				
Boring No.	Sample No.	Depth BGS (feet)	USCS Soil Class.	Soil	Grain Size Analysis: ASTM C136 & ASTM D1140				Atterberg Limits: ASTM D4318			Properties Below Taken from Hydraulic Conductivity Test Data (ASTM D5084) or Specific Gravity Test Data (ASTM D854)							Hydr. Cond. "k" (cm/sec)	
					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL	PI	Specific Gravity "G _s "	Void Ratio "e"	Porosity "n"	Saturation "S" (%)	Moisture Content "w" (%)	Dry Unit Weight "Y _{dry} " (pcf)	Total Unit Weight "Y _{total} " (pcf)		Sat. Unit Weight "Y _{sat} " (pcf)
B-01-18	ST-35	68.0 - 70.0'	CL	Grey CLAY	-	-	-	-	-	-	-	2.750	0.42	0.30	98.0	15.0	120.7	138.9	139.3	2.38E-08
B-03-18	ST-34	66.0 - 68.0'	CL	Dark Grey Silty CLAY	-	-	-	-	-	-	-	2.750	0.38	0.28	92.0	12.7	124.3	140.2	141.5	4.77E-08
B-05-18	ST-37	72.0 - 74.0'	CL	Brown-Grey CLAY	-	-	-	-	-	-	-	2.750	0.67	0.40	99.0	24.3	102.6	127.5	127.8	4.85E-08
B-10-18	ST-30	58.0 - 60.0'	CL-ML	Grey Silty CLAY with thin layers of dry SILT	-	-	-	-	-	-	-	2.750	0.45	0.31	87.0	14.3	118.1	135.0	137.6	9.84E-08
B-11-18	ST-29	56.0 - 58.0'	CL	Grey CLAY	-	-	-	-	-	-	-	2.750	0.46	0.31	100.0	16.6	117.9	137.5	137.4	3.63E-08
B-14-18	ST-33	64.0 - 66.0'	CL	Grey Silty CLAY	-	-	-	-	-	-	-	2.750	0.35	0.26	84.0	10.8	126.9	140.6	143.2	3.65E-08
B-01-18	SS-23	44.0 - 46.0'	CL	Grey Lean CLAY with Sand	2.2	19.1	51.8	26.9	11	26	15	-	-	-	-	-	-	-	-	-
B-01-18	SS-27	52.0 - 54.0'	CL	Light Grey Lean CLAY	0.8	5.5	52.9	40.8	12	34	22	-	-	-	-	-	-	-	-	-
B-02-18	SS-30	58.0 - 60.0'	CL	Light Brown Lean CLAY	0.2	7.7	55.9	36.2	12	30	18	-	-	-	-	-	-	-	-	-
B-02-18	SS-33	64.0 - 66.0'	CL	Grey Silty Lean CLAY with Sand	1.3	18.1	58.5	22.1	10	21	11	-	-	-	-	-	-	-	-	-
B-03-18	SS-29	56.0 - 58.0'	CL	Grey Lean CLAY	1.7	7.7	55.6	35.0	15	30	15	-	-	-	-	-	-	-	-	-
B-03-18	SS-32	62.0 - 64.0'	CL	Grey Silty Lean CLAY	0.9	6.4	52.2	40.5	15	32	17	-	-	-	-	-	-	-	-	-
B-04-18	SS-20	38.0 - 40.0'	CL	Greay Sandy Lean CLAY	9.4	27.4	51.2	12.0	11	19	8	-	-	-	-	-	-	-	-	-
B-04-18	SS-23	44.0 - 46.0'	CL	Light Grey Lean CLAY with Sand	2.9	19.8	48.0	29.3	11	29	18	-	-	-	-	-	-	-	-	-
B-05-18	SS-31	60.0 - 62.0'	CL	Light Grey Lean CLAY	0.0	12.3	52.9	34.8	13	28	15	-	-	-	-	-	-	-	-	-
B-06-18	SS-31	60.0 - 62.0'	CL	Grey Lean CLAY	1.1	11.2	52.3	35.4	12	33	21	-	-	-	-	-	-	-	-	-
B-07-18	SS-15	28.0 - 30.0'	CL	Light Brown Lean CLAY	0.9	12.5	64.7	21.9	14	23	9	-	-	-	-	-	-	-	-	-
B-07-18	SS-24	46.0 - 48.0'	CL	Grey Lean CLAY with Sand	1.4	18.0	56.8	23.8	13	27	14	-	-	-	-	-	-	-	-	-
B-08-18	SS-30	58.0 - 60.0'	CL	Brown, Grey Lean CLAY with Sand	0.6	19.1	53.2	27.1	13	28	15	-	-	-	-	-	-	-	-	-
B-09-18	SS-22	42.0 - 44.0'	CL-ML	Grey Silty CLAY with Sand	1.0	27.4	62.0	9.6	14	18	4	-	-	-	-	-	-	-	-	-
B-09-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with SAND	2.0	17.2	52.1	28.7	14	27	13	-	-	-	-	-	-	-	-	-
B-10-18	SS-23	44.0 - 46.0'	CL	Brown-Grey Lean CLAY with Sand	2.6	17.6	49.7	30.1	14	26	12	-	-	-	-	-	-	-	-	-
B-10-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with SAND	3.2	16.6	49.7	30.5	14	28	14	-	-	-	-	-	-	-	-	-
B-11-18	SS-22	42.0 - 44.0'	CL-ML	Grey Sandy Silty CLAY	3.1	36.2	49.4	11.3	12	17	5	-	-	-	-	-	-	-	-	-
B-11-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with Sand	0.9	19.2	50.4	29.5	14	27	13	-	-	-	-	-	-	-	-	-
B-12-18	SS-27	52.0 - 54.0'	CL	Grey Lean CLAY with Sand	4.4	18.1	49.2	28.3	13	25	12	-	-	-	-	-	-	-	-	-
B-12-18	SS-32	62.0 - 64.0'	CL	Grey Lean CLAY with Sand	3.6	17.4	55.7	23.3	12	25	13	-	-	-	-	-	-	-	-	-
B-13-18	SS-17	32.0 - 34.0'	CL-ML	Grey Silty CLAY	0.0	1.5	79.5	19.0	15	22	7	-	-	-	-	-	-	-	-	-
B-13-18	SS-26	50.0 - 52.0'	CL	Grey Lean CLAY with Sand	5.5	17.8	50.8	25.9	14	26	12	-	-	-	-	-	-	-	-	-
B-14-18	SS-26	50.0 - 52.0'	CL	Grey Lean CLAY	0.0	0.4	49.7	49.9	18	40	22	-	-	-	-	-	-	-	-	-
B-14-18	SS-31	60.0 - 62.0'	CL-ML	Brownish Grey Sandy Silty CLAY	0.6	41.6	43.8	14.0	12	18	6	-	-	-	-	-	-	-	-	-
B-15-18	SS-24	46.0 - 48.0'	CL	Greay Sandy Lean CLAY	6.0	25.2	42.9	25.9	14	28	14	-	-	-	-	-	-	-	-	-
B-15-18	SS-29	56.0 - 58.0'	CL	Grey Lean CLAY	0.0	1.5	54.9	43.6	15	32	17	-	-	-	-	-	-	-	-	-
Minimum:					0.0	0.4	42.9	9.6	10.0	17.0	4.0	2.750	0.35	0.26	84.0	10.8	102.6	127.5	127.8	2.38E-08
Maximum:					9.4	41.6	79.5	49.9	18.0	40.0	22.0	2.750	0.67	0.40	100.0	24.3	126.9	140.6	143.2	9.84E-08
Average:					2.1	16.4	53.5	28.0	13.2	26.6	13.4	2.750	0.46	0.31	93.3	15.6	118.4	136.6	137.8	4.85E-08
Note:																				
1) Values in cells shaded in gray were calculated using the soil density relationships below.																				

Soil Density Relationships:	
$\gamma_{dry} = [(G_s \times \gamma_w) / (1+e)]$	
$\gamma_{total} = [(G_s + Se) \times \gamma_w] / (1+e)$	
$\gamma_{total} = \gamma_d \times (1 + (w \% / 100))$	
$\gamma_{sat} = [(G_s + e) \times \gamma_w] / (1+e)$	
$S \% = (w \times G_s) / e$	
$n = e / (1+e)$	
$e = n / (1-n)$	

	Porosity	Effective Porosity
Average	0.31	0.31 × 0.81 = 0.25
Minimum	0.26	0.26 × 0.81 = 0.21
Maximum	0.4	0.40 × 0.81 = 0.32

Dry Density Average = 118.4 pcf = 1,896.5 kg/m³

Density Documentation

TABLE 1 ZION LANDFILL SITE 2 NORTH EXPANSION SUMMARY OF GEOTECHNICAL LABORATORY TEST RESULTS FOR WADSWORTH TILL																				
Boring No.	Sample No.	Depth BGS (feet)	USCS Soil Class.	Soil	Grain Size Analysis: ASTM C136 & ASTM D1140				Atterberg Limits: ASTM D4318			Properties Below Taken from Hydraulic Conductivity Test Data (ASTM D5084) or Specific Gravity Test Data (ASTM D854)							Hydr. Cond. "k" (cm/sec)	
					Gravel (%)	Sand (%)	Silt (%)	Clay (%)	PL	LL	PI	Specific Gravity "G _s "	Void Ratio "e"	Porosity "n"	Saturation "S" (%)	Moisture Content "w" (%)	Dry Unit Weight "Y _{dry} " (pcf)	Total Unit Weight "Y _{total} " (pcf)		Sat. Unit Weight "Y _{sat} " (pcf)
B-01-18	ST-35	68.0 - 70.0'	CL	Grey CLAY	-	-	-	-	-	-	-	2.750	0.42	0.30	98.0	15.0	120.7	138.9	139.3	2.38E-08
B-03-18	ST-34	66.0 - 68.0'	CL	Dark Grey Silty CLAY	-	-	-	-	-	-	-	2.750	0.38	0.28	92.0	12.7	124.3	140.2	141.5	4.77E-08
B-05-18	ST-37	72.0 - 74.0'	CL	Brown-Grey CLAY	-	-	-	-	-	-	-	2.750	0.67	0.40	99.0	24.3	102.6	127.5	127.8	4.85E-08
B-10-18	ST-30	58.0 - 60.0'	CL-ML	Grey Silty CLAY with thin layers of dry SILT	-	-	-	-	-	-	-	2.750	0.45	0.31	87.0	14.3	118.1	135.0	137.6	9.84E-08
B-11-18	ST-29	56.0 - 58.0'	CL	Grey CLAY	-	-	-	-	-	-	-	2.750	0.46	0.31	100.0	16.6	117.9	137.5	137.4	3.63E-08
B-14-18	ST-33	64.0 - 66.0'	CL	Grey Silty CLAY	-	-	-	-	-	-	-	2.750	0.35	0.26	84.0	10.8	126.9	140.6	143.2	3.65E-08
B-01-18	SS-23	44.0 - 46.0'	CL	Grey Lean CLAY with Sand	2.2	19.1	51.8	26.9	11	26	15	-	-	-	-	-	-	-	-	-
B-01-18	SS-27	52.0 - 54.0'	CL	Light Grey Lean CLAY	0.8	5.5	52.9	40.8	12	34	22	-	-	-	-	-	-	-	-	-
B-02-18	SS-30	58.0 - 60.0'	CL	Light Brown Lean CLAY	0.2	7.7	55.9	36.2	12	30	18	-	-	-	-	-	-	-	-	-
B-02-18	SS-33	64.0 - 66.0'	CL	Grey Silty Lean CLAY with Sand	1.3	18.1	58.5	22.1	10	21	11	-	-	-	-	-	-	-	-	-
B-03-18	SS-29	56.0 - 58.0'	CL	Grey Lean CLAY	1.7	7.7	55.6	35.0	15	30	15	-	-	-	-	-	-	-	-	-
B-03-18	SS-32	62.0 - 64.0'	CL	Grey Silty Lean CLAY	0.9	6.4	52.2	40.5	15	32	17	-	-	-	-	-	-	-	-	-
B-04-18	SS-20	38.0 - 40.0'	CL	Greay Sandy Lean CLAY	9.4	27.4	51.2	12.0	11	19	8	-	-	-	-	-	-	-	-	-
B-04-18	SS-23	44.0 - 46.0'	CL	Light Grey Lean CLAY with Sand	2.9	19.8	48.0	29.3	11	29	18	-	-	-	-	-	-	-	-	-
B-05-18	SS-31	60.0 - 62.0'	CL	Light Grey Lean CLAY	0.0	12.3	52.9	34.8	13	28	15	-	-	-	-	-	-	-	-	-
B-06-18	SS-31	60.0 - 62.0'	CL	Grey Lean CLAY	1.1	11.2	52.3	35.4	12	33	21	-	-	-	-	-	-	-	-	-
B-07-18	SS-15	28.0 - 30.0'	CL	Light Brown Lean CLAY	0.9	12.5	64.7	21.9	14	23	9	-	-	-	-	-	-	-	-	-
B-07-18	SS-24	46.0 - 48.0'	CL	Grey Lean CLAY with Sand	1.4	18.0	56.8	23.8	13	27	14	-	-	-	-	-	-	-	-	-
B-08-18	SS-30	58.0 - 60.0'	CL	Brown, Grey Lean CLAY with Sand	0.6	19.1	53.2	27.1	13	28	15	-	-	-	-	-	-	-	-	-
B-09-18	SS-22	42.0 - 44.0'	CL-ML	Grey Silty CLAY with Sand	1.0	27.4	62.0	9.6	14	18	4	-	-	-	-	-	-	-	-	-
B-09-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with SAND	2.0	17.2	52.1	28.7	14	27	13	-	-	-	-	-	-	-	-	-
B-10-18	SS-23	44.0 - 46.0'	CL	Brown-Grey Lean CLAY with Sand	2.6	17.6	49.7	30.1	14	26	12	-	-	-	-	-	-	-	-	-
B-10-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with SAND	3.2	16.6	49.7	30.5	14	28	14	-	-	-	-	-	-	-	-	-
B-11-18	SS-22	42.0 - 44.0'	CL-ML	Grey Sandy Silty CLAY	3.1	36.2	49.4	11.3	12	17	5	-	-	-	-	-	-	-	-	-
B-11-18	SS-28	54.0 - 56.0'	CL	Grey Lean CLAY with Sand	0.9	19.2	50.4	29.5	14	27	13	-	-	-	-	-	-	-	-	-
B-12-18	SS-27	52.0 - 54.0'	CL	Grey Lean CLAY with Sand	4.4	18.1	49.2	28.3	13	25	12	-	-	-	-	-	-	-	-	-
B-12-18	SS-32	62.0 - 64.0'	CL	Grey Lean CLAY with Sand	3.6	17.4	55.7	23.3	12	25	13	-	-	-	-	-	-	-	-	-
B-13-18	SS-17	32.0 - 34.0'	CL-ML	Grey Silty CLAY	0.0	1.5	79.5	19.0	15	22	7	-	-	-	-	-	-	-	-	-
B-13-18	SS-26	50.0 - 52.0'	CL	Grey Lean CLAY with Sand	5.5	17.8	50.8	25.9	14	26	12	-	-	-	-	-	-	-	-	-
B-14-18	SS-26	50.0 - 52.0'	CL	Grey Lean CLAY	0.0	0.4	49.7	49.9	18	40	22	-	-	-	-	-	-	-	-	-
B-14-18	SS-31	60.0 - 62.0'	CL-ML	Brownish Grey Sandy Silty CLAY	0.6	41.6	43.8	14.0	12	18	6	-	-	-	-	-	-	-	-	-
B-15-18	SS-24	46.0 - 48.0'	CL	Greay Sandy Lean CLAY	6.0	25.2	42.9	25.9	14	28	14	-	-	-	-	-	-	-	-	-
B-15-18	SS-29	56.0 - 58.0'	CL	Grey Lean CLAY	0.0	1.5	54.9	43.6	15	32	17	-	-	-	-	-	-	-	-	-
Minimum:					0.0	0.4	42.9	9.6	10.0	17.0	4.0	2.750	0.35	0.26	84.0	10.8	102.6	127.5	127.8	2.38E-08
Maximum:					9.4	41.6	79.5	49.9	18.0	40.0	22.0	2.750	0.67	0.40	100.0	24.3	126.9	140.6	143.2	9.84E-08
Average:					2.1	16.4	53.5	28.0	13.2	26.6	13.4	2.750	0.46	0.31	93.3	15.6	118.4	136.6	137.8	4.85E-08
Note:																				
1) Values in cells shaded in gray were calculated using the soil density relationships below.																				

Soil Density Relationships:
$\gamma_{dry} = [(G_s \times \gamma_w)] / (1+e)$
$\gamma_{total} = [(G_s + Se) \times \gamma_w] / (1+e)$
$\gamma_{total} = \gamma_d \times (1 + (w \% / 100))$
$\gamma_{sat} = [(G_s + e) \times \gamma_w] / (1+e)$
$S \% = (w \times G_s) / e$
$n = e / (1+e)$
$e = n / (1-n)$

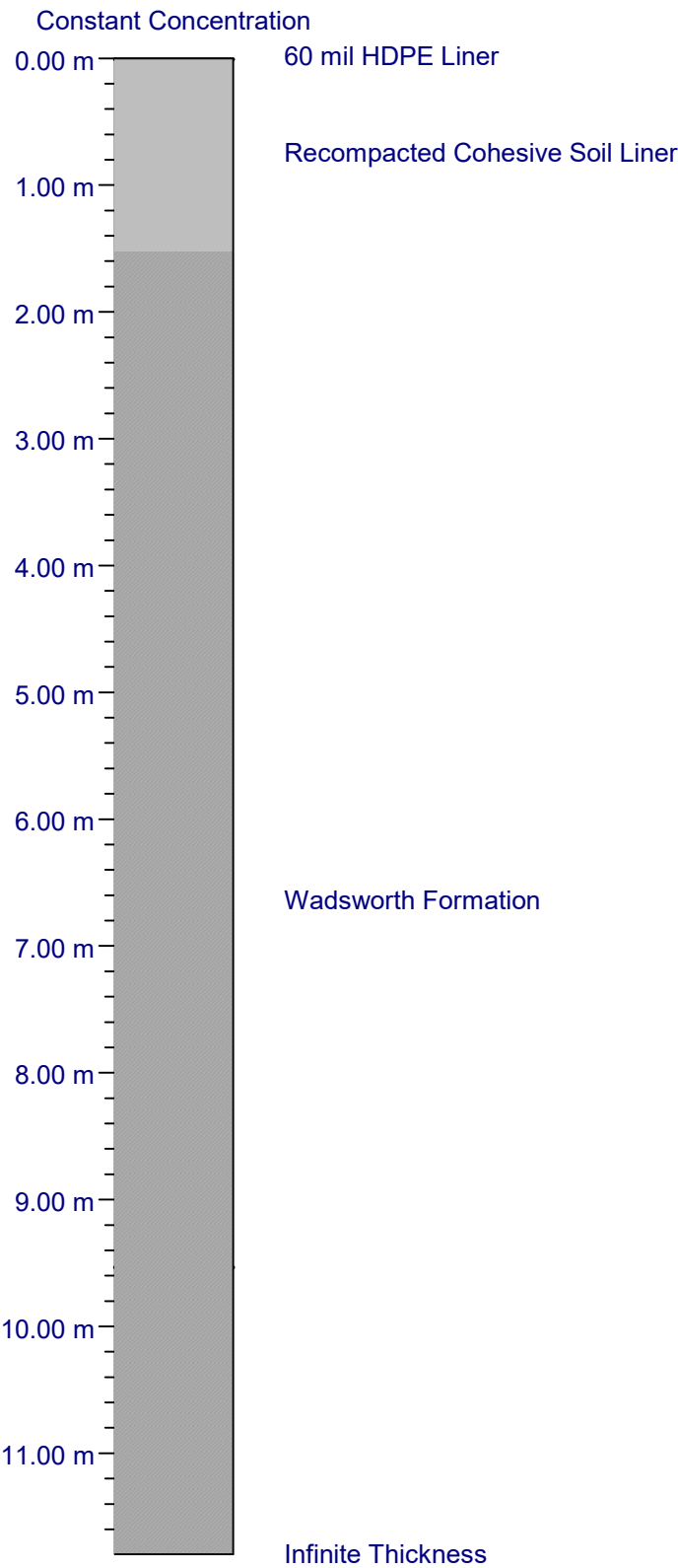
	Porosity	Effective Porosity
Average	0.31	0.31 × 0.81 = 0.25
Minimum	0.26	0.26 × 0.81 = 0.21
Maximum	0.4	0.40 × 0.81 = 0.32

Dry Density Average = 118.4 pcf = 1,896.5 kg/m³

P.4 – Baseline Model

Baseline Model Output

Site 2 North Expansion - Baseline



POLLUTEv7

Version 7.13

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GAEA Technologies Ltd., R.K. Rowe and J.R. Booker

Site 2 North Expansion - Baseline

THE Darcy Velocity (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
--------------	------------	-----------------------

5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.901E-03 1.549E-04 8.264E-06 2.807E-07 6.038E-09 8.232E-11 8.457E-13 4.476E-14 1.012E-14 2.216E-15 4.303E-16 7.375E-17 1.110E-17 1.462E-18 1.674E-19 1.658E-20 1.410E-21 1.024E-22 6.296E-24 3.257E-25 1.411E-26 5.171E-28 1.772E-29 8.637E-31 8.612E-32 1.142E-32 1.490E-33 1.802E-34 2.003E-35 2.040E-36 1.899E-37 1.611E-38 1.241E-39 8.673E-41 5.481E-42 3.134E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.872E-02 2.530E-02 6.577E-03 1.395E-03 2.378E-04 3.245E-05 3.534E-06 3.067E-07 2.116E-08 1.160E-09 5.085E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.943E-12 1.338E-13 3.493E-14 1.255E-14 4.371E-15 1.435E-15 4.432E-16 1.285E-16 3.495E-17 8.897E-18 2.116E-18 4.694E-19 9.691E-20 1.858E-20 3.302E-21 5.425E-22 8.218E-23 1.145E-23 1.464E-24 1.712E-25 1.833E-26 1.801E-27 1.661E-28 1.554E-29 1.793E-30 3.045E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.742E-01 5.025E-01 2.900E-01 1.475E-01 6.568E-02 2.547E-02 8.655E-03 2.549E-03 6.491E-04 1.426E-04 2.698E-05 4.390E-06 6.137E-07 7.364E-08 7.580E-09 6.693E-10 5.100E-11 3.525E-12 3.091E-13 6.967E-14 2.835E-14 1.236E-14 5.232E-15 2.131E-15 8.330E-16 3.125E-16 1.123E-16 3.868E-17 1.274E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.014E-18 1.207E-18 3.464E-19 9.471E-20 2.464E-20 6.096E-21 1.431E-21 3.187E-22 6.718E-23 1.339E-23 2.519E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.019E-01 5.591E-01 3.571E-01 2.078E-01 1.096E-01 5.220E-02 2.256E-02 8.775E-03 3.064E-03 9.592E-04 2.688E-04 6.736E-05 1.508E-05 3.014E-06 5.373E-07 8.541E-08 1.210E-08 1.527E-09 1.721E-10 1.754E-11 1.750E-12 2.426E-13 7.252E-14 3.321E-14 1.624E-14 7.805E-15 3.647E-15 1.654E-15 7.272E-16 3.099E-16 1.279E-16 5.113E-17 1.977E-17 7.392E-18 2.671E-18 9.318E-19 3.138E-19 1.019E-19 3.187E-20 9.601E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.215E-01 6.002E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.091E-01 2.590E-01 1.517E-01 8.198E-02 4.105E-02 1.890E-02 7.996E-03 3.102E-03 1.102E-03 3.585E-04 1.066E-04 2.898E-05 7.193E-06 1.630E-06 3.369E-07 6.354E-08 1.092E-08 1.713E-09 2.452E-10 3.228E-11 4.058E-12 5.760E-13 1.366E-13 5.747E-14 2.966E-14 1.565E-14 8.129E-15 4.126E-15 2.044E-15 9.884E-16 4.661E-16 2.143E-16 9.604E-17 4.193E-17 1.783E-17 7.377E-18 2.970E-18 1.163E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.364E-01 6.320E-01 4.508E-01 3.025E-01 1.904E-01 1.121E-01 6.201E-02 3.202E-02 1.541E-02 6.905E-03 2.878E-03 1.115E-03 4.011E-04 1.339E-04 4.149E-05 1.192E-05 3.172E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.824E-07 1.788E-07 3.782E-08 7.408E-09 1.344E-09 2.260E-10 3.547E-11 5.340E-12 8.634E-13 2.004E-13 7.938E-14 4.164E-14 2.323E-14 1.292E-14 7.068E-15 3.791E-15 1.993E-15 1.026E-15 5.175E-16 2.556E-16 1.236E-16 5.845E-17 2.705E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.482E-01 6.574E-01 4.850E-01 3.397E-01 2.254E-01 1.413E-01 8.402E-02 4.711E-02 2.489E-02 1.237E-02 5.784E-03 2.540E-03 1.048E-03 4.055E-04 1.472E-04 5.012E-05 1.599E-05 4.780E-06 1.339E-06 3.511E-07 8.621E-08 1.982E-08 4.264E-09 8.593E-10 1.624E-10 2.898E-11 5.017E-12 9.292E-13 2.332E-13 9.356E-14 5.002E-14 2.901E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.693E-14 9.766E-15 5.542E-15 3.091E-15 1.695E-15 9.128E-16 4.830E-16 2.509E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.578E-01 6.783E-01 5.139E-01 3.721E-01 2.570E-01 1.690E-01 1.062E-01 6.338E-02 3.593E-02 1.932E-02 9.847E-03 4.755E-03 2.174E-03 9.402E-04 3.847E-04 1.488E-04 5.440E-05 1.879E-05 6.133E-06 1.890E-06 5.501E-07 1.511E-07 3.919E-08 9.592E-09 2.216E-09 4.835E-10 9.986E-11 1.969E-11 3.823E-12 8.077E-13 2.286E-13 9.792E-14 5.416E-14 3.246E-14 1.966E-14 1.179E-14 6.981E-15 4.072E-15 2.339E-15 1.323E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.659E-01 6.960E-01 5.386E-01 4.004E-01 2.856E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.950E-01 1.279E-01 8.022E-02 4.806E-02 2.748E-02 1.499E-02 7.794E-03 3.861E-03 1.822E-03 8.181E-04 3.497E-04 1.422E-04 5.497E-05 2.021E-05 7.064E-06 2.347E-06 7.408E-07 2.222E-07 6.330E-08 1.713E-08 4.405E-09 1.076E-09 2.500E-10 5.542E-11 1.187E-11 2.553E-12 6.162E-13 2.011E-13 9.439E-14 5.458E-14 3.372E-14 2.103E-14 1.302E-14 7.964E-15 4.809E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.728E-01 7.111E-01 5.600E-01 4.255E-01 3.115E-01 2.194E-01 1.490E-01 9.723E-02 6.090E-02 3.659E-02 2.108E-02 1.163E-02 6.147E-03 3.109E-03 1.505E-03 6.968E-04 3.085E-04 1.306E-04 5.282E-05 2.042E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.543E-06 2.661E-06 8.968E-07 2.886E-07 8.870E-08 2.603E-08 7.291E-09 1.950E-09 4.984E-10 1.219E-10 2.869E-11 6.612E-12 1.574E-12 4.386E-13 1.670E-13 8.641E-14 5.232E-14 3.325E-14 2.126E-14 1.349E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.788E-01 7.243E-01 5.789E-01 4.479E-01 3.351E-01 2.420E-01 1.692E-01 1.141E-01 7.416E-02 4.642E-02 2.796E-02 1.620E-02 9.030E-03 4.837E-03 2.490E-03 1.231E-03 5.844E-04 2.664E-04 1.165E-04 4.893E-05 1.971E-05 7.620E-06 2.825E-06 1.005E-06 3.426E-07 1.120E-07 3.512E-08 1.056E-08 3.043E-09 8.413E-10 2.233E-10 5.706E-11 1.417E-11 3.513E-12 9.347E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.053E-13 1.357E-13 7.678E-14 4.847E-14 3.158E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.840E-01 7.360E-01 5.957E-01 4.680E-01 3.566E-01 2.632E-01 1.886E-01 1.307E-01 8.762E-02 5.675E-02 3.549E-02 2.143E-02 1.248E-02 7.014E-03 3.800E-03 1.985E-03 9.990E-04 4.844E-04 2.263E-04 1.018E-04 4.410E-05 1.839E-05 7.385E-06 2.854E-06 1.062E-06 3.800E-07 1.309E-07 4.337E-08 1.383E-08 4.243E-09 1.253E-09 3.561E-10 9.766E-11 2.598E-11 6.805E-12 1.830E-12 5.550E-13 2.152E-13 1.101E-13 6.709E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.886E-01 7.463E-01 6.107E-01 4.863E-01 3.764E-01 2.829E-01 2.070E-01 1.469E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.011E-01 6.741E-02 4.353E-02 2.721E-02 1.646E-02 9.634E-03 5.452E-03 2.983E-03 1.578E-03 8.062E-04 3.981E-04 1.899E-04 8.746E-05 3.891E-05 1.671E-05 6.931E-06 2.775E-06 1.072E-06 3.999E-07 1.440E-07 5.001E-08 1.676E-08 5.422E-09 1.693E-09 5.103E-10 1.487E-10 4.203E-11 1.164E-11 3.237E-12 9.627E-13 3.410E-13 1.568E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.928E-01 7.556E-01 6.242E-01 5.028E-01 3.946E-01 3.014E-01 2.245E-01 1.626E-01 1.145E-01 7.828E-02 5.196E-02 3.347E-02 2.092E-02 1.268E-02 7.447E-03 4.241E-03 2.340E-03 1.251E-03 6.478E-04 3.249E-04 1.578E-04 7.418E-05 3.377E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.488E-05 6.344E-06 2.618E-06 1.045E-06 4.040E-07 1.510E-07 5.463E-08 1.912E-08 6.472E-09 2.120E-09 6.720E-10 2.064E-10 6.154E-11 1.793E-11 5.196E-12 1.560E-12 5.277E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.965E-01 7.639E-01 6.365E-01 5.180E-01 4.115E-01 3.187E-01 2.412E-01 1.778E-01 1.277E-01 8.924E-02 6.067E-02 4.012E-02 2.579E-02 1.611E-02 9.777E-03 5.765E-03 3.301E-03 1.835E-03 9.903E-04 5.188E-04 2.637E-04 1.301E-04 6.227E-05 2.892E-05 1.302E-05 5.690E-06 2.411E-06 9.908E-07 3.948E-07 1.525E-07 5.715E-08 2.076E-08 7.312E-09 2.497E-09 8.271E-10 2.659E-10 8.310E-11 2.537E-11

	1.149E+01 1.180E+01	7.659E-12 2.354E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.999E-01 7.716E-01 6.477E-01 5.320E-01 4.271E-01 3.349E-01 2.570E-01 1.925E-01 1.407E-01 1.002E-01 6.959E-02 4.708E-02 3.102E-02 1.990E-02 1.243E-02 7.555E-03 4.468E-03 2.571E-03 1.439E-03 7.829E-04 4.143E-04 2.132E-04 1.066E-04 5.184E-05 2.450E-05 1.125E-05 5.021E-06 2.177E-06 9.175E-07 3.756E-07 1.494E-07 5.772E-08 2.167E-08 7.900E-09 2.799E-09 9.633E-10 3.224E-10 1.050E-10 3.344E-11 1.050E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.031E-01 7.785E-01 6.581E-01 5.449E-01 4.417E-01 3.502E-01 2.721E-01 2.067E-01 1.534E-01 1.111E-01 7.862E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.428E-02 3.656E-02 2.402E-02 1.538E-02 9.605E-03 5.846E-03 3.467E-03 2.003E-03 1.128E-03 6.183E-04 3.302E-04 1.717E-04 8.695E-05 4.287E-05 2.057E-05 9.612E-06 4.372E-06 1.935E-06 8.337E-07 3.496E-07 1.426E-07 5.663E-08 2.188E-08 8.227E-09 3.010E-09 1.072E-09 3.718E-10 1.257E-10 4.155E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.059E-01 7.849E-01 6.676E-01 5.569E-01 4.553E-01 3.646E-01 2.865E-01 2.203E-01 1.658E-01 1.220E-01 8.773E-02 6.168E-02 4.236E-02 2.842E-02 1.862E-02 1.191E-02 7.434E-03 4.530E-03 2.693E-03 1.562E-03 8.840E-04 4.880E-04 2.627E-04 1.379E-04 7.060E-05 3.524E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.715E-05 8.137E-06 3.764E-06 1.697E-06 7.456E-07 3.194E-07 1.333E-07 5.424E-08 2.150E-08 8.309E-09 3.129E-09 1.149E-09 4.112E-10 1.437E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.085E-01 7.908E-01 6.764E-01 5.680E-01 4.680E-01 3.782E-01 3.001E-01 2.334E-01 1.778E-01 1.326E-01 9.686E-02 6.921E-02 4.838E-02 3.307E-02 2.211E-02 1.445E-02 9.229E-03 5.761E-03 3.514E-03 2.094E-03 1.219E-03 6.931E-04 3.849E-04 2.087E-04 1.105E-04 5.714E-05 2.884E-05 1.421E-05 6.836E-06 3.210E-06 1.471E-06 6.580E-07 2.873E-07 1.224E-07 5.089E-08 2.065E-08 8.178E-09 3.160E-09 1.192E-09 4.391E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.110E-01 7.963E-01 6.846E-01 5.784E-01 4.800E-01 3.910E-01 3.131E-01 2.460E-01 1.896E-01 1.432E-01 1.060E-01 7.684E-02 5.457E-02 3.795E-02 2.583E-02 1.721E-02 1.122E-02 7.161E-03 4.470E-03 2.729E-03 1.630E-03 9.516E-04 5.434E-04 3.034E-04 1.656E-04 8.838E-05 4.610E-05 2.351E-05 1.171E-05 5.706E-06 2.716E-06 1.263E-06 5.742E-07 2.550E-07 1.107E-07 4.694E-08 1.945E-08 7.873E-09 3.114E-09 1.204E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.132E-01 8.014E-01 6.922E-01 5.881E-01 4.912E-01 4.031E-01 3.255E-01 2.582E-01 2.010E-01 1.535E-01 1.150E-01 8.452E-02 6.090E-02 4.301E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.977E-02 2.019E-02 1.341E-02 8.727E-03 5.562E-03 3.472E-03 2.121E-03 1.269E-03 7.433E-04 4.261E-04 2.391E-04 1.313E-04 7.056E-05 3.711E-05 1.909E-05 9.613E-06 4.735E-06 2.282E-06 1.076E-06 4.962E-07 2.239E-07 9.880E-08 4.265E-08 1.801E-08 7.438E-09 3.005E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.153E-01 8.062E-01 6.994E-01 5.973E-01 5.019E-01 4.147E-01 3.374E-01 2.698E-01 2.120E-01 1.636E-01 1.240E-01 9.224E-02 6.733E-02 4.823E-02 3.389E-02 2.335E-02 1.578E-02 1.046E-02 6.792E-03 4.325E-03 2.699E-03 1.651E-03 9.892E-04 5.809E-04 3.342E-04 1.884E-04 1.040E-04 5.626E-05 2.981E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.547E-05 7.860E-06 3.912E-06 1.906E-06 9.099E-07 4.253E-07 1.946E-07 8.720E-08 3.826E-08 1.644E-08 6.914E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.173E-01 8.107E-01 7.061E-01 6.059E-01 5.119E-01 4.256E-01 3.488E-01 2.811E-01 2.228E-01 1.736E-01 1.329E-01 9.996E-02 7.385E-02 5.358E-02 3.817E-02 2.669E-02 1.832E-02 1.234E-02 8.157E-03 5.290E-03 3.365E-03 2.100E-03 1.285E-03 7.716E-04 4.542E-04 2.622E-04 1.484E-04 8.235E-05 4.481E-05 2.390E-05 1.250E-05 6.405E-06 3.218E-06 1.585E-06 7.648E-07 3.618E-07 1.677E-07 7.622E-08 3.394E-08 1.481E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.192E-01 8.148E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.124E-01 6.140E-01 5.214E-01 4.360E-01 3.596E-01 2.919E-01 2.332E-01 1.833E-01 1.417E-01 1.077E-01 8.042E-02 5.904E-02 4.260E-02 3.019E-02 2.102E-02 1.438E-02 9.656E-03 6.368E-03 4.123E-03 2.621E-03 1.635E-03 1.002E-03 6.022E-04 3.553E-04 2.057E-04 1.169E-04 6.516E-05 3.565E-05 1.913E-05 1.007E-05 5.204E-06 2.637E-06 1.311E-06 6.394E-07 3.059E-07 1.435E-07 6.606E-08 2.982E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.209E-01 8.188E-01 7.184E-01 6.217E-01 5.304E-01 4.460E-01 3.700E-01 3.024E-01 2.433E-01 1.928E-01 1.503E-01 1.153E-01 8.703E-02 6.460E-02 4.715E-02 3.384E-02 2.387E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.656E-02 1.128E-02 7.557E-03 4.973E-03 3.216E-03 2.043E-03 1.275E-03 7.812E-04 4.703E-04 2.780E-04 1.614E-04 9.205E-05 5.154E-05 2.834E-05 1.530E-05 8.107E-06 4.218E-06 2.155E-06 1.081E-06 5.321E-07 2.572E-07 1.220E-07 5.682E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.225E-01 8.225E-01 7.240E-01 6.290E-01 5.390E-01 4.554E-01 3.800E-01 3.125E-01 2.532E-01 2.021E-01 1.588E-01 1.229E-01 9.365E-02 7.022E-02 5.181E-02 3.761E-02 2.686E-02 1.887E-02 1.304E-02 8.857E-03 5.917E-03 3.886E-03 2.510E-03 1.593E-03 9.940E-04 6.096E-04 3.675E-04 2.177E-04 1.267E-04 7.249E-05 4.075E-05 2.251E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.221E-05 6.513E-06 3.412E-06 1.756E-06 8.877E-07 4.409E-07 2.151E-07 1.031E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.241E-01 8.260E-01 7.294E-01 6.359E-01 5.471E-01 4.645E-01 3.895E-01 3.222E-01 2.627E-01 2.111E-01 1.672E-01 1.305E-01 1.003E-01 7.589E-02 5.656E-02 4.150E-02 2.998E-02 2.131E-02 1.491E-02 1.027E-02 6.954E-03 4.635E-03 3.039E-03 1.960E-03 1.243E-03 7.757E-04 4.760E-04 2.873E-04 1.705E-04 9.949E-05 5.709E-05 3.221E-05 1.787E-05 9.744E-06 5.225E-06 2.754E-06 1.427E-06 7.270E-07 3.640E-07 1.792E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.256E-01 8.294E-01 7.344E-01 6.424E-01 5.549E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.732E-01 3.987E-01 3.315E-01 2.719E-01 2.200E-01 1.754E-01 1.379E-01 1.069E-01 8.160E-02 6.139E-02 4.549E-02 3.321E-02 2.387E-02 1.690E-02 1.178E-02 8.083E-03 5.460E-03 3.631E-03 2.377E-03 1.531E-03 9.708E-04 6.057E-04 3.719E-04 2.247E-04 1.336E-04 7.812E-05 4.496E-05 2.545E-05 1.417E-05 7.766E-06 4.186E-06 2.219E-06 1.157E-06 5.937E-07 2.996E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.275E-01 8.337E-01 7.411E-01 6.511E-01 5.652E-01 4.847E-01 4.110E-01 3.441E-01 2.844E-01 2.320E-01 1.867E-01 1.482E-01 1.161E-01 8.964E-02 6.825E-02 5.123E-02 3.790E-02 2.764E-02 1.986E-02 1.407E-02

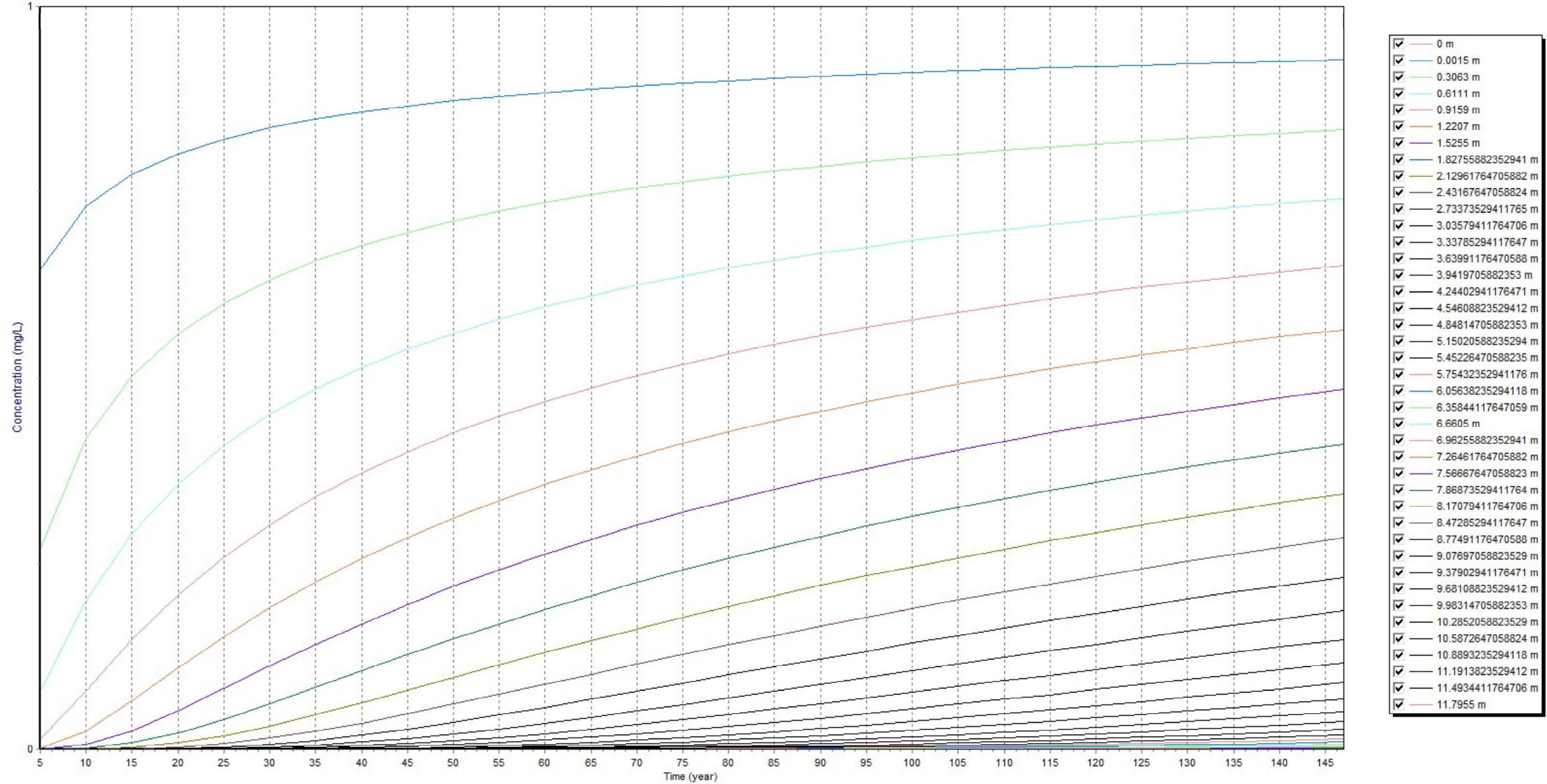
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	7.265E+00	2.003E-03
	7.567E+00	1.297E-03
	7.869E+00	8.265E-04
	8.171E+00	5.188E-04
	8.473E+00	3.208E-04
	8.775E+00	1.953E-04
	9.077E+00	1.171E-04
	9.379E+00	6.909E-05
	9.681E+00	4.015E-05
	9.983E+00	2.297E-05
	1.029E+01	1.294E-05
	1.059E+01	7.178E-06
	1.089E+01	3.920E-06
	1.119E+01	2.107E-06
	1.149E+01	1.115E-06
	1.180E+01	5.807E-07

NOTICE

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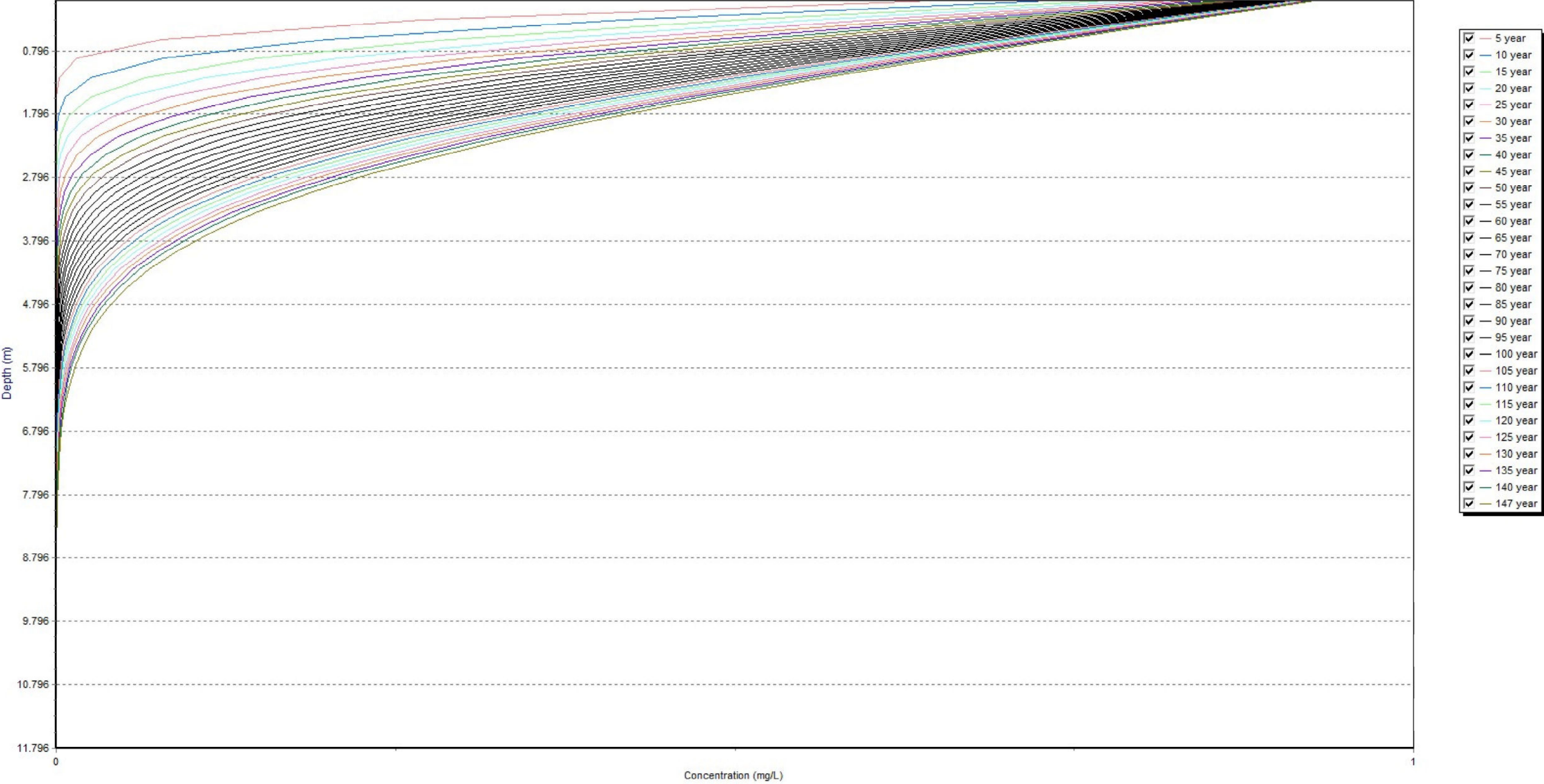
Concentration vs. Time Plot

Site 2 North Expansion - Baseline



Concentration vs. Distance Plot

Site 2 North Expansion - Baseline



P.5 – Sensitivity Analyses

SUMMARY OF SENSITIVITY ANALYSIS RESULTS

Summary of Results - Sensitivity Analysis Proposed Zion Landfill Site 2 North Expansion Zion, Illinois
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Sensitivity Analysis Run Number	Layer	Input Parameter Varied From Baseline	Justification	Baseline Value	Prediction Factor at the Zone of Attenuation ¹	Sensitivity Satisfactory?	File Name ²
1	High Density Polyethylene Geomembrane (HDPE)	Coef. Hydro. Disp. = 3.75E-05 m ² /yr	Increase by 25%	3.0E-05 m ² /yr	6.23E-07	Yes	Sens1
2	High Density Polyethylene Geomembrane (HDPE)	Coef. Hydro. Disp. = 2.25E-05 m ² /yr	Decrease by 25%	3.0E-05 m ² /yr	5.21E-07	Yes	Sens2
3	5-Foot Recompacted Cohesive Soil Liner	Coef. Hydro. Disp = 0.024 m ² /yr	Increase by 25%	0.019 m ² /yr	8.45E-07	Yes	Sens3
4	5-Foot Recompacted Cohesive Soil Liner	Coef. Hydro. Disp = 0.014 m ² /yr	Decrease by 25%	0.019 m ² /yr	3.27E-07	Yes	Sens4
5	5-Foot Recompacted Cohesive Soil Liner	Effective Porosity = 0.32	Site Maximum	0.25	5.88E-07	Yes	Sens5
6	5-Foot Recompacted Cohesive Soil Liner	Effective Porosity = 0.21	Site Minimum	0.25	5.67E-07	Yes	Sens6
7	Wadsworth Formation	Coef. Hydro. Disp = 0.024 m ² /yr	Increase by 25%	0.019 m ² /yr	5.63E-06	Yes	Sens7
8	Wadsworth Formation	Coef. Hydro. Disp = 0.014 m ² /yr	Decrease by 25%	0.019 m ² /yr	1.28E-08	Yes	Sens8
9	Wadsworth Formation	Effective Porosity = 0.32	Site Maximum	0.25	4.74E-07	Yes	Sens9
10	Wadsworth Formation	Effective Porosity = 0.21	Site Minimum	0.25	6.72E-07	Yes	Sens10
11	Wadsworth Formation	Thickness = 13.29 m	Site Maximum	10.27 m	3.60E-10	Yes	Sens11
12	Wadsworth Formation	Thickness = 6.00 m	Site Minimum	10.27 m	1.38E-03	Yes ³	Sens12
13	All Layers	Darcy Velocity = 3.08E-03 m/yr	Increased by an Order of Magnitude	Darcy Velocity = 3.08E-04 m/yr	1.48E-05	Yes	Sens13

Note:

1. The prediction factor is the value obtained at the base of the Wadsworth Formation prior to the zone of attenuation after 147 years for the respective sensitivity run.
2. Input and output files are saved with the same file root name but with different extensions - .in was used for input files and .ou was used for output files.
3. A surrogate model was run for the secondary minimum thickness which provided satisfactory results.

SENSITIVITY RUN #1
HDPE
COEF. HYDRO. DISP. = $3.75\text{E-}05 \text{ m}^2/\text{yr}$

Increase by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens1

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3.75E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 7.007E-01 2.973E-01 8.725E-02 1.711E-02 2.190E-03 1.802E-04 9.694E-06 3.318E-07 7.186E-09 9.855E-11 1.005E-12 5.033E-14 1.136E-14 2.497E-15 4.869E-16 8.379E-17 1.267E-17 1.674E-18 1.924E-19 1.912E-20 1.633E-21 1.189E-22 7.341E-24 3.811E-25 1.656E-26 6.083E-28 2.080E-29 9.985E-31 9.839E-32 1.304E-32 1.704E-33 2.066E-34 2.302E-35 2.350E-36 2.192E-37 1.863E-38 1.439E-39 1.008E-40 6.381E-42 3.656E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.771E-01 4.499E-01 2.177E-01 8.673E-02 2.815E-02 7.381E-03 1.578E-03 2.708E-04 3.718E-05 4.074E-06 3.553E-07 2.464E-08 1.357E-09 5.968E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.272E-12 1.505E-13 3.836E-14 1.380E-14 4.819E-15 1.587E-15 4.916E-16 1.430E-16 3.899E-17 9.951E-18 2.373E-18 5.279E-19 1.093E-19 2.101E-20 3.743E-21 6.165E-22 9.362E-23 1.308E-23 1.676E-24 1.965E-25 2.108E-26 2.075E-27 1.915E-28 1.786E-29 2.038E-30 3.422E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.148E-01 5.341E-01 3.111E-01 1.597E-01 7.168E-02 2.801E-02 9.586E-03 2.842E-03 7.279E-04 1.608E-04 3.057E-05 4.998E-06 7.018E-07 8.457E-08 8.738E-09 7.743E-10 5.916E-11 4.083E-12 3.497E-13 7.613E-14 3.077E-14 1.343E-14 5.702E-15 2.327E-15 9.121E-16 3.429E-16 1.236E-16 4.264E-17 1.408E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.445E-18 1.340E-18 3.853E-19 1.056E-19 2.753E-20 6.823E-21 1.606E-21 3.582E-22 7.566E-23 1.511E-23 2.848E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.383E-01 5.892E-01 3.794E-01 2.224E-01 1.181E-01 5.665E-02 2.464E-02 9.640E-03 3.385E-03 1.065E-03 2.999E-04 7.550E-05 1.698E-05 3.406E-06 6.096E-07 9.723E-08 1.382E-08 1.750E-09 1.978E-10 2.019E-11 2.004E-12 2.705E-13 7.861E-14 3.578E-14 1.751E-14 8.433E-15 3.948E-15 1.794E-15 7.903E-16 3.375E-16 1.396E-16 5.588E-17 2.165E-17 8.110E-18 2.936E-18 1.026E-18 3.462E-19 1.126E-19 3.529E-20 1.065E-20
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.549E-01 6.289E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.315E-01 2.750E-01 1.621E-01 8.812E-02 4.437E-02 2.055E-02 8.735E-03 3.405E-03 1.216E-03 3.970E-04 1.186E-04 3.235E-05 8.060E-06 1.833E-06 3.801E-07 7.190E-08 1.240E-08 1.950E-09 2.798E-10 3.690E-11 4.631E-12 6.481E-13 1.492E-13 6.172E-14 3.177E-14 1.679E-14 8.732E-15 4.440E-15 2.204E-15 1.067E-15 5.041E-16 2.322E-16 1.042E-16 4.558E-17 1.941E-17 8.045E-18 3.244E-18 1.272E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.673E-01 6.592E-01 4.729E-01 3.192E-01 2.020E-01 1.196E-01 6.652E-02 3.451E-02 1.669E-02 7.512E-03 3.145E-03 1.223E-03 4.418E-04 1.481E-04 4.603E-05 1.326E-05 3.543E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.765E-07 2.008E-07 4.261E-08 8.370E-09 1.522E-09 2.566E-10 4.034E-11 6.067E-12 9.709E-13 2.197E-13 8.520E-14 4.442E-14 2.479E-14 1.381E-14 7.562E-15 4.062E-15 2.138E-15 1.103E-15 5.570E-16 2.755E-16 1.334E-16 6.319E-17 2.928E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.771E-01 6.833E-01 5.068E-01 3.569E-01 2.379E-01 1.499E-01 8.956E-02 5.045E-02 2.677E-02 1.336E-02 6.273E-03 2.766E-03 1.145E-03 4.447E-04 1.620E-04 5.533E-05 1.771E-05 5.310E-06 1.491E-06 3.922E-07 9.656E-08 2.225E-08 4.800E-09 9.695E-10 1.836E-10 3.281E-11 5.673E-12 1.041E-12 2.553E-13 1.003E-13 5.321E-14 3.083E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.801E-14 1.040E-14 5.911E-15 3.302E-15 1.813E-15 9.776E-16 5.179E-16 2.695E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.851E-01 7.031E-01 5.352E-01 3.894E-01 2.702E-01 1.785E-01 1.126E-01 6.751E-02 3.842E-02 2.074E-02 1.061E-02 5.144E-03 2.360E-03 1.024E-03 4.204E-04 1.631E-04 5.982E-05 2.073E-05 6.783E-06 2.096E-06 6.116E-07 1.684E-07 4.379E-08 1.074E-08 2.487E-09 5.438E-10 1.125E-10 2.221E-11 4.303E-12 8.998E-13 2.492E-13 1.047E-13 5.746E-14 3.440E-14 2.084E-14 1.252E-14 7.420E-15 4.333E-15 2.492E-15 1.412E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.917E-01 7.198E-01 5.594E-01 4.177E-01 2.991E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.052E-01 1.351E-01 8.506E-02 5.115E-02 2.936E-02 1.607E-02 8.386E-03 4.168E-03 1.973E-03 8.889E-04 3.810E-04 1.554E-04 6.025E-05 2.221E-05 7.784E-06 2.592E-06 8.204E-07 2.466E-07 7.043E-08 1.911E-08 4.922E-09 1.205E-09 2.804E-10 6.226E-11 1.334E-11 2.859E-12 6.817E-13 2.178E-13 1.005E-13 5.774E-14 3.564E-14 2.224E-14 1.378E-14 8.440E-15 5.102E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.974E-01 7.340E-01 5.803E-01 4.427E-01 3.253E-01 2.300E-01 1.568E-01 1.027E-01 6.456E-02 3.893E-02 2.250E-02 1.246E-02 6.604E-03 3.351E-03 1.627E-03 7.554E-04 3.354E-04 1.423E-04 5.774E-05 2.238E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.286E-06 2.930E-06 9.898E-07 3.193E-07 9.833E-08 2.891E-08 8.116E-09 2.175E-09 5.570E-10 1.364E-10 3.214E-11 7.403E-12 1.753E-12 4.812E-13 1.795E-13 9.163E-14 5.522E-14 3.507E-14 2.243E-14 1.425E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 9.023E-01 7.464E-01 5.987E-01 4.649E-01 3.490E-01 2.530E-01 1.776E-01 1.201E-01 7.834E-02 4.920E-02 2.973E-02 1.728E-02 9.661E-03 5.190E-03 2.679E-03 1.328E-03 6.323E-04 2.890E-04 1.268E-04 5.336E-05 2.155E-05 8.348E-06 3.102E-06 1.106E-06 3.778E-07 1.238E-07 3.890E-08 1.172E-08 3.383E-09 9.369E-10 2.491E-10 6.373E-11 1.583E-11 3.917E-12 1.033E-12

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.317E-13 1.447E-13 8.109E-14 5.103E-14 3.323E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.065E-01 7.572E-01 6.150E-01 4.849E-01 3.707E-01 2.745E-01 1.973E-01 1.372E-01 9.227E-02 5.995E-02 3.761E-02 2.277E-02 1.331E-02 7.498E-03 4.074E-03 2.133E-03 1.076E-03 5.233E-04 2.451E-04 1.105E-04 4.799E-05 2.006E-05 8.072E-06 3.126E-06 1.165E-06 4.180E-07 1.442E-07 4.789E-08 1.530E-08 4.703E-09 1.391E-09 3.960E-10 1.088E-10 2.895E-11 7.578E-12 2.029E-12 6.079E-13 2.315E-13 1.167E-13 7.062E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 9.103E-01 7.669E-01 6.295E-01 5.029E-01 3.905E-01 2.945E-01 2.161E-01 1.538E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.062E-01 7.101E-02 4.599E-02 2.883E-02 1.749E-02 1.026E-02 5.824E-03 3.195E-03 1.694E-03 8.677E-04 4.295E-04 2.053E-04 9.479E-05 4.226E-05 1.819E-05 7.561E-06 3.033E-06 1.174E-06 4.389E-07 1.583E-07 5.508E-08 1.850E-08 5.994E-09 1.875E-09 5.659E-10 1.651E-10 4.673E-11 1.294E-11 3.590E-12 1.059E-12 3.695E-13 1.671E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 9.137E-01 7.755E-01 6.426E-01 5.192E-01 4.087E-01 3.131E-01 2.339E-01 1.699E-01 1.200E-01 8.225E-02 5.475E-02 3.536E-02 2.216E-02 1.346E-02 7.930E-03 4.527E-03 2.504E-03 1.342E-03 6.965E-04 3.501E-04 1.704E-04 8.028E-05 3.662E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.617E-05 6.908E-06 2.856E-06 1.143E-06 4.424E-07 1.657E-07 6.004E-08 2.105E-08 7.137E-09 2.342E-09 7.435E-10 2.286E-10 6.826E-11 1.990E-11 5.758E-12 1.720E-12 5.750E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 9.168E-01 7.833E-01 6.545E-01 5.342E-01 4.255E-01 3.305E-01 2.508E-01 1.854E-01 1.335E-01 9.356E-02 6.378E-02 4.228E-02 2.724E-02 1.706E-02 1.038E-02 6.135E-03 3.521E-03 1.962E-03 1.061E-03 5.572E-04 2.839E-04 1.403E-04 6.731E-05 3.132E-05 1.413E-05 6.186E-06 2.626E-06 1.081E-06 4.316E-07 1.670E-07 6.269E-08 2.281E-08 8.047E-09 2.752E-09 9.130E-10 2.939E-10 9.197E-11 2.810E-11

	1.149E+01 1.180E+01	8.476E-12 2.596E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.195E-01 7.904E-01 6.653E-01 5.479E-01 4.411E-01 3.468E-01 2.668E-01 2.004E-01 1.468E-01 1.048E-01 7.299E-02 4.950E-02 3.270E-02 2.103E-02 1.316E-02 8.019E-03 4.754E-03 2.741E-03 1.537E-03 8.384E-04 4.446E-04 2.292E-04 1.149E-04 5.597E-05 2.650E-05 1.219E-05 5.451E-06 2.368E-06 9.996E-07 4.099E-07 1.633E-07 6.320E-08 2.376E-08 8.678E-09 3.079E-09 1.061E-09 3.556E-10 1.160E-10 3.696E-11 1.160E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.221E-01 7.969E-01 6.753E-01 5.606E-01 4.555E-01 3.621E-01 2.821E-01 2.148E-01 1.598E-01 1.161E-01 8.231E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.696E-02 3.845E-02 2.532E-02 1.625E-02 1.017E-02 6.204E-03 3.687E-03 2.135E-03 1.204E-03 6.617E-04 3.541E-04 1.845E-04 9.359E-05 4.623E-05 2.223E-05 1.040E-05 4.740E-06 2.102E-06 9.070E-07 3.809E-07 1.557E-07 6.191E-08 2.396E-08 9.021E-09 3.306E-09 1.179E-09 4.094E-10 1.386E-10 4.584E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.244E-01 8.028E-01 6.844E-01 5.723E-01 4.690E-01 3.765E-01 2.965E-01 2.286E-01 1.724E-01 1.271E-01 9.167E-02 6.460E-02 4.447E-02 2.990E-02 1.963E-02 1.258E-02 7.872E-03 4.806E-03 2.863E-03 1.664E-03 9.437E-04 5.219E-04 2.815E-04 1.481E-04 7.593E-05 3.797E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.851E-05 8.798E-06 4.076E-06 1.841E-06 8.101E-07 3.475E-07 1.453E-07 5.920E-08 2.351E-08 9.097E-09 3.431E-09 1.261E-09 4.520E-10 1.581E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.265E-01 8.083E-01 6.929E-01 5.832E-01 4.816E-01 3.901E-01 3.103E-01 2.419E-01 1.847E-01 1.381E-01 1.010E-01 7.236E-02 5.069E-02 3.473E-02 2.326E-02 1.524E-02 9.752E-03 6.100E-03 3.728E-03 2.226E-03 1.298E-03 7.395E-04 4.114E-04 2.235E-04 1.186E-04 6.140E-05 3.105E-05 1.532E-05 7.383E-06 3.472E-06 1.594E-06 7.141E-07 3.122E-07 1.332E-07 5.548E-08 2.254E-08 8.940E-09 3.460E-09 1.307E-09 4.819E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.285E-01 8.134E-01 7.008E-01 5.934E-01 4.935E-01 4.029E-01 3.234E-01 2.546E-01 1.966E-01 1.488E-01 1.104E-01 8.021E-02 5.708E-02 3.978E-02 2.713E-02 1.812E-02 1.184E-02 7.567E-03 4.732E-03 2.895E-03 1.732E-03 1.013E-03 5.796E-04 3.242E-04 1.773E-04 9.475E-05 4.951E-05 2.528E-05 1.262E-05 6.157E-06 2.935E-06 1.367E-06 6.225E-07 2.769E-07 1.203E-07 5.110E-08 2.120E-08 8.595E-09 3.405E-09 1.318E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.303E-01 8.181E-01 7.081E-01 6.029E-01 5.046E-01 4.150E-01 3.358E-01 2.669E-01 2.082E-01 1.593E-01 1.196E-01 8.810E-02 6.361E-02 4.501E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.121E-02 2.121E-02 1.412E-02 9.205E-03 5.878E-03 3.675E-03 2.250E-03 1.348E-03 7.911E-04 4.543E-04 2.553E-04 1.405E-04 7.561E-05 3.982E-05 2.052E-05 1.035E-05 5.106E-06 2.464E-06 1.163E-06 5.374E-07 2.428E-07 1.073E-07 4.638E-08 1.961E-08 8.110E-09 3.281E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.320E-01 8.225E-01 7.150E-01 6.118E-01 5.151E-01 4.265E-01 3.477E-01 2.787E-01 2.194E-01 1.697E-01 1.288E-01 9.601E-02 7.023E-02 5.040E-02 3.548E-02 2.450E-02 1.658E-02 1.101E-02 7.164E-03 4.570E-03 2.857E-03 1.750E-03 1.051E-03 6.181E-04 3.562E-04 2.011E-04 1.112E-04 6.025E-05 3.197E-05

	8.775E+00 8.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.661E-05 8.455E-06 4.214E-06 2.057E-06 9.831E-07 4.601E-07 2.108E-07 9.461E-08 4.156E-08 1.788E-08 7.530E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.336E-01 8.266E-01 7.214E-01 6.202E-01 5.250E-01 4.374E-01 3.591E-01 2.900E-01 2.303E-01 1.798E-01 1.379E-01 1.039E-01 7.692E-02 5.591E-02 3.991E-02 2.796E-02 1.922E-02 1.297E-02 8.590E-03 5.580E-03 3.556E-03 2.223E-03 1.363E-03 8.194E-04 4.831E-04 2.793E-04 1.583E-04 8.801E-05 4.796E-05 2.562E-05 1.341E-05 6.885E-06 3.464E-06 1.708E-06 8.256E-07 3.911E-07 1.816E-07 8.261E-08 3.684E-08 1.610E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.351E-01 8.305E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.274E-01 6.281E-01 5.344E-01 4.477E-01 3.699E-01 3.009E-01 2.408E-01 1.896E-01 1.468E-01 1.118E-01 8.366E-02 6.154E-02 4.448E-02 3.158E-02 2.203E-02 1.509E-02 1.015E-02 6.706E-03 4.350E-03 2.769E-03 1.731E-03 1.062E-03 6.394E-04 3.778E-04 2.191E-04 1.247E-04 6.961E-05 3.813E-05 2.050E-05 1.081E-05 5.591E-06 2.837E-06 1.413E-06 6.898E-07 3.304E-07 1.552E-07 7.153E-08 3.233E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.365E-01 8.341E-01 7.331E-01 6.356E-01 5.433E-01 4.576E-01 3.803E-01 3.114E-01 2.510E-01 1.992E-01 1.556E-01 1.196E-01 9.043E-02 6.724E-02 4.917E-02 3.535E-02 2.498E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.735E-02 1.185E-02 7.947E-03 5.239E-03 3.393E-03 2.158E-03 1.349E-03 8.281E-04 4.992E-04 2.956E-04 1.719E-04 9.816E-05 5.504E-05 3.030E-05 1.638E-05 8.693E-06 4.529E-06 2.317E-06 1.163E-06 5.736E-07 2.776E-07 1.318E-07 6.148E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.379E-01 8.376E-01 7.385E-01 6.427E-01 5.517E-01 4.670E-01 3.903E-01 3.215E-01 2.610E-01 2.086E-01 1.643E-01 1.274E-01 9.720E-02 7.301E-02 5.396E-02 3.924E-02 2.807E-02 1.975E-02 1.367E-02 9.301E-03 6.224E-03 4.094E-03 2.648E-03 1.683E-03 1.052E-03 6.461E-04 3.900E-04 2.314E-04 1.349E-04 7.727E-05 4.350E-05 2.406E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.307E-05 6.980E-06 3.661E-06 1.887E-06 9.551E-07 4.750E-07 2.320E-07 1.114E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.391E-01 8.408E-01 7.436E-01 6.494E-01 5.597E-01 4.760E-01 3.998E-01 3.313E-01 2.706E-01 2.178E-01 1.728E-01 1.351E-01 1.040E-01 7.883E-02 5.885E-02 4.325E-02 3.129E-02 2.228E-02 1.561E-02 1.077E-02 7.304E-03 4.875E-03 3.201E-03 2.068E-03 1.314E-03 8.209E-04 5.045E-04 3.049E-04 1.812E-04 1.059E-04 6.084E-05 3.437E-05 1.909E-05 1.043E-05 5.597E-06 2.954E-06 1.533E-06 7.817E-07 3.919E-07 1.932E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.403E-01 8.439E-01 7.485E-01 6.558E-01 5.674E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.846E-01 4.090E-01 3.407E-01 2.799E-01 2.268E-01 1.812E-01 1.427E-01 1.107E-01 8.467E-02 6.380E-02 4.736E-02 3.462E-02 2.493E-02 1.767E-02 1.234E-02 8.479E-03 5.737E-03 3.821E-03 2.504E-03 1.616E-03 1.026E-03 6.410E-04 3.941E-04 2.384E-04 1.419E-04 8.312E-05 4.789E-05 2.715E-05 1.514E-05 8.306E-06 4.482E-06 2.379E-06 1.242E-06 6.381E-07 3.224E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.419E-01 8.479E-01 7.548E-01 6.642E-01 5.775E-01 4.960E-01 4.212E-01 3.533E-01 2.924E-01 2.389E-01 1.926E-01 1.531E-01 1.201E-01 9.289E-02 7.083E-02 5.325E-02 3.946E-02 2.882E-02 2.074E-02 1.471E-02

	6.056E+00	1.028E-02
	6.358E+00	7.077E-03
	6.660E+00	4.800E-03
	6.963E+00	3.207E-03
	7.265E+00	2.110E-03
	7.567E+00	1.368E-03
	7.869E+00	8.729E-04
	8.171E+00	5.487E-04
	8.473E+00	3.397E-04
	8.775E+00	2.071E-04
	9.077E+00	1.243E-04
	9.379E+00	7.345E-05
	9.681E+00	4.274E-05
	9.983E+00	2.449E-05
	1.029E+01	1.381E-05
	1.059E+01	7.670E-06
	1.089E+01	4.193E-06
	1.119E+01	2.256E-06
	1.149E+01	1.195E-06
	1.180E+01	6.234E-07

NOTICE

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SENSITIVITY RUN #2
HDPE
COEF. HYDRO. DISP. = $2.25\text{E-}05 \text{ m}^2/\text{yr}$

Decrease by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens2

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$2.25E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 5.693E-01 2.315E-01 6.556E-02 1.248E-02 1.557E-03 1.253E-04 6.619E-06 2.228E-07 4.750E-09 6.428E-11 6.671E-13 3.781E-14 8.569E-15 1.865E-15 3.603E-16 6.144E-17 9.206E-18 1.206E-18 1.375E-19 1.355E-20 1.148E-21 8.296E-23 5.080E-24 2.618E-25 1.129E-26 4.128E-28 1.420E-29 7.049E-31 7.128E-32 9.460E-33 1.231E-33 1.485E-34 1.646E-35 1.672E-36 1.552E-37 1.312E-38 1.009E-39 7.030E-41 4.431E-42 2.527E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 6.629E-01 3.725E-01 1.753E-01 6.815E-02 2.164E-02 5.564E-03 1.169E-03 1.975E-04 2.675E-05 2.893E-06 2.494E-07 1.711E-08 9.330E-10 4.071E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.564E-12 1.133E-13 3.040E-14 1.091E-14 3.785E-15 1.238E-15 3.808E-16 1.100E-16 2.981E-17 7.560E-18 1.792E-18 3.961E-19 8.151E-20 1.558E-20 2.760E-21 4.519E-22 6.824E-23 9.479E-24 1.208E-24 1.409E-25 1.504E-26 1.475E-27 1.359E-28 1.279E-29 1.495E-30 2.575E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.131E-01 4.565E-01 2.601E-01 1.307E-01 5.758E-02 2.211E-02 7.446E-03 2.175E-03 5.497E-04 1.199E-04 2.255E-05 3.648E-06 5.072E-07 6.056E-08 6.204E-09 5.455E-10 4.142E-11 2.872E-12 2.599E-13 6.113E-14 2.506E-14 1.090E-14 4.601E-15 1.867E-15 7.279E-16 2.722E-16 9.756E-17 3.350E-17 1.100E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.456E-18 1.036E-18 2.966E-19 8.086E-20 2.098E-20 5.176E-21 1.212E-21 2.692E-22 5.660E-23 1.125E-23 2.111E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 7.460E-01 5.141E-01 3.248E-01 1.871E-01 9.771E-02 4.612E-02 1.977E-02 7.630E-03 2.645E-03 8.226E-04 2.291E-04 5.709E-05 1.271E-05 2.528E-06 4.486E-07 7.098E-08 1.001E-08 1.259E-09 1.414E-10 1.439E-11 1.447E-12 2.078E-13 6.432E-14 2.967E-14 1.448E-14 6.944E-15 3.236E-15 1.463E-15 6.418E-16 2.728E-16 1.123E-16 4.477E-17 1.727E-17 6.441E-18 2.321E-18 8.080E-19 2.714E-19 8.792E-20 2.744E-20 8.247E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 7.697E-01 5.568E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.759E-01 2.358E-01 1.369E-01 7.338E-02 3.646E-02 1.667E-02 7.005E-03 2.700E-03 9.538E-04 3.085E-04 9.127E-05 2.468E-05 6.099E-06 1.376E-06 2.832E-07 5.320E-08 9.113E-09 1.424E-09 2.032E-10 2.670E-11 3.366E-12 4.875E-13 1.202E-13 5.160E-14 2.670E-14 1.407E-14 7.289E-15 3.691E-15 1.825E-15 8.801E-16 4.141E-16 1.900E-16 8.493E-17 3.700E-17 1.569E-17 6.481E-18 2.604E-18 1.017E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 7.879E-01 5.902E-01 4.174E-01 2.778E-01 1.734E-01 1.014E-01 5.568E-02 2.856E-02 1.366E-02 6.083E-03 2.521E-03 9.713E-04 3.477E-04 1.155E-04 3.562E-05 1.019E-05 2.701E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.636E-07 1.510E-07 3.184E-08 6.216E-09 1.124E-09 1.885E-10 2.953E-11 4.455E-12 7.309E-13 1.756E-13 7.140E-14 3.771E-14 2.104E-14 1.168E-14 6.374E-15 3.411E-15 1.789E-15 9.195E-16 4.628E-16 2.281E-16 1.100E-16 5.195E-17 2.399E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.025E-01 6.172E-01 4.519E-01 3.142E-01 2.069E-01 1.288E-01 7.610E-02 4.241E-02 2.227E-02 1.101E-02 5.117E-03 2.236E-03 9.176E-04 3.535E-04 1.278E-04 4.331E-05 1.376E-05 4.098E-06 1.144E-06 2.988E-07 7.313E-08 1.676E-08 3.595E-09 7.222E-10 1.362E-10 2.426E-11 4.210E-12 7.904E-13 2.046E-13 8.435E-14 4.550E-14 2.641E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.539E-14 8.861E-15 5.019E-15 2.794E-15 1.529E-15 8.221E-16 4.341E-16 2.251E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.146E-01 6.396E-01 4.812E-01 3.460E-01 2.374E-01 1.551E-01 9.685E-02 5.748E-02 3.240E-02 1.733E-02 8.786E-03 4.221E-03 1.921E-03 8.270E-04 3.369E-04 1.298E-04 4.726E-05 1.626E-05 5.288E-06 1.624E-06 4.711E-07 1.290E-07 3.335E-08 8.139E-09 1.875E-09 4.080E-10 8.408E-11 1.657E-11 3.228E-12 6.921E-13 2.018E-13 8.862E-14 4.947E-14 2.968E-14 1.795E-14 1.076E-14 6.355E-15 3.700E-15 2.122E-15 1.198E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.247E-01 6.586E-01 5.064E-01 3.742E-01 2.652E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.800E-01 1.174E-01 7.322E-02 4.363E-02 2.482E-02 1.347E-02 6.971E-03 3.438E-03 1.615E-03 7.222E-04 3.074E-04 1.245E-04 4.796E-05 1.757E-05 6.121E-06 2.026E-06 6.377E-07 1.907E-07 5.416E-08 1.462E-08 3.748E-09 9.131E-10 2.116E-10 4.684E-11 1.003E-11 2.170E-12 5.330E-13 1.791E-13 8.587E-14 5.004E-14 3.095E-14 1.929E-14 1.192E-14 7.280E-15 4.389E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.334E-01 6.750E-01 5.285E-01 3.992E-01 2.905E-01 2.035E-01 1.375E-01 8.923E-02 5.561E-02 3.325E-02 1.906E-02 1.047E-02 5.509E-03 2.775E-03 1.338E-03 6.169E-04 2.721E-04 1.148E-04 4.626E-05 1.782E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.562E-06 2.308E-06 7.754E-07 2.488E-07 7.625E-08 2.231E-08 6.234E-09 1.663E-09 4.241E-10 1.035E-10 2.433E-11 5.617E-12 1.349E-12 3.837E-13 1.502E-13 7.906E-14 4.815E-14 3.062E-14 1.955E-14 1.240E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.410E-01 6.894E-01 5.480E-01 4.217E-01 3.137E-01 2.254E-01 1.568E-01 1.052E-01 6.806E-02 4.240E-02 2.543E-02 1.467E-02 8.141E-03 4.343E-03 2.226E-03 1.097E-03 5.187E-04 2.356E-04 1.027E-04 4.299E-05 1.726E-05 6.653E-06 2.459E-06 8.719E-07 2.965E-07 9.670E-08 3.024E-08 9.067E-09 2.607E-09 7.190E-10 1.904E-10 4.859E-11 1.206E-11 3.003E-12 8.089E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.706E-13 1.232E-13 7.061E-14 4.475E-14 2.916E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.476E-01 7.021E-01 5.653E-01 4.420E-01 3.350E-01 2.461E-01 1.754E-01 1.211E-01 8.077E-02 5.207E-02 3.243E-02 1.950E-02 1.131E-02 6.331E-03 3.417E-03 1.778E-03 8.918E-04 4.309E-04 2.006E-04 8.996E-05 3.885E-05 1.615E-05 6.467E-06 2.492E-06 9.244E-07 3.300E-07 1.134E-07 3.748E-08 1.192E-08 3.648E-09 1.075E-09 3.049E-10 8.347E-11 2.218E-11 5.820E-12 1.577E-12 4.865E-13 1.934E-13 1.008E-13 6.198E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.536E-01 7.134E-01 5.810E-01 4.604E-01 3.547E-01 2.654E-01 1.933E-01 1.366E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	9.356E-02 6.212E-02 3.995E-02 2.487E-02 1.499E-02 8.738E-03 4.927E-03 2.686E-03 1.415E-03 7.209E-04 3.548E-04 1.687E-04 7.747E-05 3.436E-05 1.472E-05 6.086E-06 2.430E-06 9.365E-07 3.484E-07 1.251E-07 4.335E-08 1.450E-08 4.679E-09 1.458E-09 4.385E-10 1.275E-10 3.601E-11 9.971E-12 2.785E-12 8.381E-13 3.033E-13 1.427E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.589E-01 7.236E-01 5.951E-01 4.772E-01 3.728E-01 2.835E-01 2.103E-01 1.517E-01 1.063E-01 7.240E-02 4.787E-02 3.071E-02 1.912E-02 1.155E-02 6.759E-03 3.835E-03 2.109E-03 1.124E-03 5.802E-04 2.901E-04 1.404E-04 6.584E-05 2.988E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.313E-05 5.584E-06 2.298E-06 9.155E-07 3.529E-07 1.316E-07 4.750E-08 1.658E-08 5.602E-09 1.831E-09 5.793E-10 1.776E-10 5.288E-11 1.540E-11 4.473E-12 1.354E-12 4.658E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.637E-01 7.328E-01 6.080E-01 4.927E-01 3.897E-01 3.006E-01 2.265E-01 1.664E-01 1.190E-01 8.282E-02 5.609E-02 3.695E-02 2.366E-02 1.473E-02 8.910E-03 5.235E-03 2.988E-03 1.656E-03 8.908E-04 4.652E-04 2.358E-04 1.160E-04 5.537E-05 2.564E-05 1.152E-05 5.019E-06 2.122E-06 8.697E-07 3.457E-07 1.333E-07 4.982E-08 1.806E-08 6.346E-09 2.163E-09 7.150E-10 2.294E-10 7.161E-11 2.185E-11

	1.149E+01 1.180E+01	6.603E-12 2.040E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.681E-01 7.412E-01 6.198E-01 5.070E-01 4.054E-01 3.166E-01 2.420E-01 1.806E-01 1.314E-01 9.328E-02 6.453E-02 4.350E-02 2.856E-02 1.826E-02 1.137E-02 6.887E-03 4.060E-03 2.329E-03 1.299E-03 7.050E-04 3.720E-04 1.909E-04 9.521E-05 4.617E-05 2.176E-05 9.968E-06 4.438E-06 1.920E-06 8.071E-07 3.297E-07 1.308E-07 5.044E-08 1.889E-08 6.874E-09 2.430E-09 8.350E-10 2.789E-10 9.075E-11 2.887E-11 9.065E-12
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 8.721E-01 7.490E-01 6.306E-01 5.202E-01 4.200E-01 3.318E-01 2.568E-01 1.943E-01 1.437E-01 1.037E-01 7.313E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.031E-02 3.377E-02 2.211E-02 1.412E-02 8.787E-03 5.331E-03 3.152E-03 1.816E-03 1.019E-03 5.573E-04 2.968E-04 1.539E-04 7.774E-05 3.823E-05 1.830E-05 8.531E-06 3.871E-06 1.709E-06 7.348E-07 3.074E-07 1.252E-07 4.959E-08 1.912E-08 7.176E-09 2.620E-09 9.315E-10 3.225E-10 1.089E-10 3.595E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 8.758E-01 7.561E-01 6.407E-01 5.325E-01 4.337E-01 3.460E-01 2.709E-01 2.076E-01 1.556E-01 1.141E-01 8.182E-02 5.733E-02 3.924E-02 2.624E-02 1.714E-02 1.093E-02 6.802E-03 4.132E-03 2.450E-03 1.417E-03 7.997E-04 4.402E-04 2.364E-04 1.238E-04 6.321E-05 3.147E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.528E-05 7.233E-06 3.338E-06 1.501E-06 6.583E-07 2.814E-07 1.172E-07 4.759E-08 1.883E-08 7.263E-09 2.730E-09 1.000E-09 3.575E-10 1.247E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.792E-01 7.626E-01 6.500E-01 5.439E-01 4.466E-01 3.596E-01 2.844E-01 2.204E-01 1.673E-01 1.244E-01 9.055E-02 6.449E-02 4.494E-02 3.063E-02 2.041E-02 1.330E-02 8.469E-03 5.272E-03 3.206E-03 1.906E-03 1.106E-03 6.273E-04 3.475E-04 1.880E-04 9.928E-05 5.121E-05 2.579E-05 1.268E-05 6.085E-06 2.851E-06 1.304E-06 5.819E-07 2.535E-07 1.078E-07 4.474E-08 1.812E-08 7.161E-09 2.763E-09 1.040E-09 3.825E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.823E-01 7.687E-01 6.587E-01 5.546E-01 4.587E-01 3.724E-01 2.972E-01 2.328E-01 1.788E-01 1.346E-01 9.929E-02 7.177E-02 5.081E-02 3.523E-02 2.391E-02 1.589E-02 1.033E-02 6.572E-03 4.091E-03 2.491E-03 1.483E-03 8.641E-04 4.922E-04 2.741E-04 1.493E-04 7.947E-05 4.136E-05 2.104E-05 1.046E-05 5.085E-06 2.415E-06 1.121E-06 5.086E-07 2.254E-07 9.765E-08 4.133E-08 1.709E-08 6.907E-09 2.727E-09 1.053E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 8.853E-01 7.744E-01 6.668E-01 5.647E-01 4.701E-01 3.845E-01 3.095E-01 2.447E-01 1.899E-01 1.446E-01 1.080E-01 7.912E-02 5.684E-02 4.002E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.762E-02 1.868E-02 1.237E-02 8.031E-03 5.105E-03 3.178E-03 1.937E-03 1.156E-03 6.753E-04 3.862E-04 2.162E-04 1.184E-04 6.350E-05 3.332E-05 1.711E-05 8.595E-06 4.225E-06 2.032E-06 9.561E-07 4.401E-07 1.982E-07 8.729E-08 3.761E-08 1.585E-08 6.536E-09 2.636E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.880E-01 7.797E-01 6.744E-01 5.741E-01 4.809E-01 3.961E-01 3.213E-01 2.562E-01 2.007E-01 1.544E-01 1.167E-01 8.652E-02 6.298E-02 4.498E-02 3.151E-02 2.166E-02 1.460E-02 9.645E-03 6.249E-03 3.969E-03 2.471E-03 1.507E-03 9.012E-04 5.279E-04 3.030E-04 1.704E-04 9.389E-05 5.067E-05 2.679E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.387E-05 7.034E-06 3.494E-06 1.699E-06 8.095E-07 3.776E-07 1.725E-07 7.715E-08 3.379E-08 1.449E-08 6.085E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.906E-01 7.847E-01 6.815E-01 5.830E-01 4.911E-01 4.071E-01 3.326E-01 2.673E-01 2.112E-01 1.641E-01 1.252E-01 9.394E-02 6.921E-02 5.007E-02 3.557E-02 2.481E-02 1.699E-02 1.141E-02 7.523E-03 4.867E-03 3.088E-03 1.923E-03 1.174E-03 7.031E-04 4.129E-04 2.378E-04 1.343E-04 7.438E-05 4.038E-05 2.149E-05 1.122E-05 5.737E-06 2.877E-06 1.414E-06 6.812E-07 3.217E-07 1.489E-07 6.752E-08 3.002E-08 1.308E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.930E-01 7.894E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.882E-01 5.914E-01 5.007E-01 4.175E-01 3.434E-01 2.780E-01 2.214E-01 1.735E-01 1.337E-01 1.014E-01 7.551E-02 5.529E-02 3.978E-02 2.812E-02 1.953E-02 1.332E-02 8.926E-03 5.872E-03 3.793E-03 2.405E-03 1.497E-03 9.151E-04 5.489E-04 3.231E-04 1.867E-04 1.059E-04 5.889E-05 3.215E-05 1.722E-05 9.050E-06 4.666E-06 2.360E-06 1.171E-06 5.701E-07 2.722E-07 1.275E-07 5.859E-08 2.640E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.952E-01 7.938E-01 6.946E-01 5.994E-01 5.099E-01 4.275E-01 3.537E-01 2.883E-01 2.314E-01 1.828E-01 1.421E-01 1.087E-01 8.185E-02 6.060E-02 4.412E-02 3.158E-02 2.222E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.537E-02 1.045E-02 6.984E-03 4.585E-03 2.958E-03 1.875E-03 1.167E-03 7.138E-04 4.288E-04 2.530E-04 1.466E-04 8.340E-05 4.660E-05 2.557E-05 1.378E-05 7.288E-06 3.785E-06 1.930E-06 9.662E-07 4.749E-07 2.291E-07 1.085E-07 5.045E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.974E-01 7.980E-01 7.006E-01 6.069E-01 5.187E-01 4.371E-01 3.637E-01 2.983E-01 2.410E-01 1.919E-01 1.504E-01 1.161E-01 8.822E-02 6.598E-02 4.856E-02 3.517E-02 2.505E-02 1.756E-02 1.210E-02 8.202E-03 5.467E-03 3.583E-03 2.308E-03 1.462E-03 9.103E-04 5.571E-04 3.351E-04 1.981E-04 1.151E-04 6.571E-05 3.687E-05 2.032E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.101E-05 5.859E-06 3.064E-06 1.574E-06 7.944E-07 3.939E-07 1.919E-07 9.180E-08
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.994E-01 8.019E-01 7.062E-01 6.141E-01 5.270E-01 4.462E-01 3.733E-01 3.079E-01 2.504E-01 2.007E-01 1.586E-01 1.234E-01 9.461E-02 7.143E-02 5.311E-02 3.887E-02 2.801E-02 1.987E-02 1.387E-02 9.525E-03 6.438E-03 4.281E-03 2.801E-03 1.802E-03 1.141E-03 7.105E-04 4.351E-04 2.620E-04 1.552E-04 9.039E-05 5.177E-05 2.915E-05 1.614E-05 8.787E-06 4.703E-06 2.475E-06 1.280E-06 6.510E-07 3.255E-07 1.599E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.013E-01 8.057E-01 7.116E-01 6.209E-01 5.350E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.550E-01 3.825E-01 3.172E-01 2.595E-01 2.094E-01 1.666E-01 1.307E-01 1.010E-01 7.692E-02 5.773E-02 4.268E-02 3.108E-02 2.229E-02 1.574E-02 1.095E-02 7.497E-03 5.054E-03 3.354E-03 2.190E-03 1.408E-03 8.910E-04 5.548E-04 3.400E-04 2.050E-04 1.216E-04 7.100E-05 4.078E-05 2.305E-05 1.281E-05 7.008E-06 3.770E-06 1.996E-06 1.039E-06 5.321E-07 2.681E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.039E-01 8.106E-01 7.188E-01 6.300E-01 5.456E-01 4.667E-01 3.948E-01 3.297E-01 2.719E-01 2.212E-01 1.776E-01 1.407E-01 1.099E-01 8.467E-02 6.431E-02 4.816E-02 3.556E-02 2.587E-02 1.855E-02 1.311E-02

	6.056E+00	9.127E-03
	6.358E+00	6.261E-03
	6.660E+00	4.231E-03
	6.963E+00	2.817E-03
	7.265E+00	1.847E-03
	7.567E+00	1.193E-03
	7.869E+00	7.591E-04
	8.171E+00	4.756E-04
	8.473E+00	2.935E-04
	8.775E+00	1.783E-04
	9.077E+00	1.067E-04
	9.379E+00	6.287E-05
	9.681E+00	3.647E-05
	9.983E+00	2.083E-05
	1.029E+01	1.172E-05
	1.059E+01	6.486E-06
	1.089E+01	3.536E-06
	1.119E+01	1.897E-06
	1.149E+01	1.002E-06
	1.180E+01	5.213E-07

NOTICE

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SENSITIVITY RUN #3
5-FOOT RECOMPACTED COHESIVE SOIL LINER
COEF. HYDRO. DISP. = 0.024 m²/yr

Increase by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens3

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.024 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.148E-01 2.842E-01 9.880E-02 2.517E-02 4.615E-03 6.346E-04 4.323E-05 1.884E-06 5.216E-08 9.134E-10 1.034E-11 1.539E-13 2.239E-14 5.160E-15 1.070E-15 1.963E-16 3.172E-17 4.495E-18 5.557E-19 5.960E-20 5.513E-21 4.369E-22 2.945E-23 1.677E-24 8.009E-26 3.207E-27 1.113E-28 4.144E-30 2.823E-31 3.414E-32 4.563E-33 5.764E-34 6.712E-35 7.173E-36 7.014E-37 6.261E-38 5.087E-39 3.751E-40 2.505E-41 1.513E-42
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.037E-01 4.284E-01 2.269E-01 1.034E-01 4.043E-02 1.404E-02 3.344E-03 6.420E-04 9.887E-05 1.218E-05 1.197E-06 9.363E-08 5.823E-09 2.881E-10

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.158E-11 4.911E-13 6.606E-14 2.209E-14 7.887E-15 2.673E-15 8.531E-16 2.559E-16 7.203E-17 1.900E-17 4.687E-18 1.080E-18 2.317E-19 4.626E-20 8.567E-21 1.469E-21 2.326E-22 3.392E-23 4.545E-24 5.582E-25 6.271E-26 6.449E-27 6.129E-28 5.605E-29 5.601E-30 7.659E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.500E-01 5.105E-01 3.170E-01 1.786E-01 9.143E-02 4.363E-02 1.598E-02 5.080E-03 1.399E-03 3.327E-04 6.824E-05 1.205E-05 1.830E-06 2.386E-07 2.670E-08 2.563E-09 2.114E-10 1.522E-11 1.087E-12 1.395E-13 4.568E-14 1.971E-14 8.498E-15 3.533E-15 1.412E-15 5.412E-16 1.990E-16 7.012E-17 2.365E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.630E-18 2.352E-18 6.922E-19 1.942E-19 5.190E-20 1.319E-20 3.186E-21 7.301E-22 1.585E-22 3.257E-23 6.321E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 7.798E-01 5.654E-01 3.830E-01 2.417E-01 1.425E-01 8.003E-02 3.652E-02 1.502E-02 5.554E-03 1.843E-03 5.480E-04 1.458E-04 3.469E-05 7.370E-06 1.398E-06 2.364E-07 3.565E-08 4.791E-09 5.741E-10 6.163E-11 6.108E-12 6.628E-13 1.295E-13 5.055E-14 2.436E-14 1.185E-14 5.622E-15 2.590E-15 1.157E-15 5.013E-16 2.105E-16 8.555E-17 3.366E-17 1.281E-17 4.714E-18 1.676E-18 5.750E-19 1.904E-19 6.075E-20 1.867E-20
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.012E-01 6.056E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.339E-01 2.943E-01 1.895E-01 1.175E-01 6.138E-02 2.953E-02 1.306E-02 5.305E-03 1.975E-03 6.733E-04 2.100E-04 5.990E-05 1.561E-05 3.715E-06 8.070E-07 1.599E-07 2.890E-08 4.764E-09 7.162E-10 9.853E-11 1.260E-11 1.618E-12 2.776E-13 8.926E-14 4.293E-14 2.259E-14 1.185E-14 6.088E-15 3.055E-15 1.496E-15 7.147E-16 3.330E-16 1.512E-16 6.694E-17 2.886E-17 1.211E-17 4.948E-18 1.966E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.175E-01 6.368E-01 4.747E-01 3.385E-01 2.315E-01 1.536E-01 8.794E-02 4.706E-02 2.349E-02 1.093E-02 4.732E-03 1.905E-03 7.128E-04 2.476E-04 7.984E-05 2.387E-05 6.619E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.701E-06 4.049E-07 8.929E-08 1.823E-08 3.448E-09 6.039E-10 9.827E-11 1.504E-11 2.289E-12 4.197E-13 1.263E-13 5.935E-14 3.252E-14 1.817E-14 1.003E-14 5.434E-15 2.886E-15 1.502E-15 7.659E-16 3.824E-16 1.869E-16 8.944E-17 4.187E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.306E-01 6.620E-01 5.084E-01 3.762E-01 2.689E-01 1.873E-01 1.147E-01 6.628E-02 3.611E-02 1.853E-02 8.944E-03 4.059E-03 1.730E-03 6.925E-04 2.601E-04 9.161E-05 3.025E-05 9.364E-06 2.716E-06 7.376E-07 1.876E-07 4.469E-08 9.964E-09 2.080E-09 4.068E-10 7.478E-11 1.309E-11 2.295E-12 4.733E-13 1.484E-13 7.043E-14 3.975E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.321E-14 1.348E-14 7.715E-15 4.342E-15 2.402E-15 1.305E-15 6.971E-16 3.656E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.414E-01 6.830E-01 5.369E-01 4.088E-01 3.023E-01 2.186E-01 1.408E-01 8.627E-02 5.022E-02 2.775E-02 1.454E-02 7.224E-03 3.398E-03 1.513E-03 6.374E-04 2.540E-04 9.567E-05 3.406E-05 1.146E-05 3.640E-06 1.092E-06 3.094E-07 8.276E-08 2.089E-08 4.979E-09 1.120E-09 2.382E-10 4.807E-11 9.357E-12 1.856E-12 4.372E-13 1.511E-13 7.503E-14 4.372E-14 2.643E-14 1.595E-14 9.509E-15 5.589E-15 3.236E-15 1.845E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.506E-01 7.008E-01 5.614E-01 4.374E-01 3.322E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.473E-01 1.659E-01 1.064E-01 6.527E-02 3.823E-02 2.136E-02 1.139E-02 5.785E-03 2.800E-03 1.290E-03 5.659E-04 2.362E-04 9.379E-05 3.541E-05 1.271E-05 4.339E-06 1.407E-06 4.338E-07 1.270E-07 3.534E-08 9.338E-09 2.344E-09 5.594E-10 1.271E-10 2.767E-11 5.894E-12 1.313E-12 3.576E-13 1.399E-13 7.414E-14 4.474E-14 2.786E-14 1.733E-14 1.067E-14 6.483E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.584E-01 7.162E-01 5.827E-01 4.627E-01 3.591E-01 2.738E-01 1.897E-01 1.263E-01 8.081E-02 4.960E-02 2.920E-02 1.647E-02 8.902E-03 4.606E-03 2.281E-03 1.081E-03 4.899E-04 2.123E-04 8.796E-05 3.483E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.318E-05 4.763E-06 1.645E-06 5.424E-07 1.708E-07 5.138E-08 1.475E-08 4.045E-09 1.059E-09 2.652E-10 6.364E-11 1.479E-11 3.428E-12 8.617E-13 2.747E-13 1.227E-13 6.967E-14 4.352E-14 2.781E-14 1.773E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.653E-01 7.296E-01 6.015E-01 4.852E-01 3.835E-01 2.982E-01 2.123E-01 1.458E-01 9.655E-02 6.160E-02 3.784E-02 2.237E-02 1.272E-02 6.953E-03 3.653E-03 1.844E-03 8.943E-04 4.164E-04 1.861E-04 7.986E-05 3.288E-05 1.299E-05 4.923E-06 1.790E-06 6.241E-07 2.087E-07 6.690E-08 2.057E-08 6.063E-09 1.714E-09 4.647E-10 1.211E-10 3.050E-11 7.532E-12 1.907E-12

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.490E-13 2.069E-13 1.049E-13 6.339E-14 4.085E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.713E-01 7.415E-01 6.183E-01 5.054E-01 4.057E-01 3.208E-01 2.336E-01 1.647E-01 1.123E-01 7.398E-02 4.710E-02 2.896E-02 1.718E-02 9.834E-03 5.429E-03 2.890E-03 1.483E-03 7.330E-04 3.491E-04 1.602E-04 7.078E-05 3.011E-05 1.234E-05 4.864E-06 1.846E-06 6.743E-07 2.370E-07 8.018E-08 2.610E-08 8.172E-09 2.463E-09 7.142E-10 1.996E-10 5.392E-11 1.420E-11 3.740E-12 1.050E-12 3.531E-13 1.572E-13 8.879E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.767E-01 7.521E-01 6.333E-01 5.237E-01 4.259E-01 3.416E-01 2.537E-01 1.828E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.278E-01 8.658E-02 5.682E-02 3.611E-02 2.222E-02 1.322E-02 7.614E-03 4.239E-03 2.281E-03 1.187E-03 5.965E-04 2.897E-04 1.359E-04 6.157E-05 2.694E-05 1.138E-05 4.641E-06 1.827E-06 6.943E-07 2.547E-07 9.014E-08 3.079E-08 1.015E-08 3.229E-09 9.917E-10 2.942E-10 8.447E-11 2.361E-11 6.522E-12 1.854E-12 5.906E-13 2.360E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.815E-01 7.616E-01 6.469E-01 5.404E-01 4.445E-01 3.610E-01 2.726E-01 2.003E-01 1.430E-01 9.924E-02 6.687E-02 4.374E-02 2.776E-02 1.709E-02 1.020E-02 5.902E-03 3.310E-03 1.799E-03 9.469E-04 4.828E-04 2.384E-04 1.140E-04 5.278E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.365E-05 1.026E-05 4.308E-06 1.750E-06 6.881E-07 2.618E-07 9.636E-08 3.431E-08 1.182E-08 3.941E-09 1.271E-09 3.970E-10 1.202E-10 3.542E-11 1.026E-11 3.004E-12 9.430E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.859E-01 7.703E-01 6.592E-01 5.556E-01 4.616E-01 3.790E-01 2.905E-01 2.170E-01 1.579E-01 1.119E-01 7.713E-02 5.172E-02 3.373E-02 2.138E-02 1.317E-02 7.879E-03 4.580E-03 2.585E-03 1.417E-03 7.536E-04 3.891E-04 1.950E-04 9.480E-05 4.472E-05 2.047E-05 9.085E-06 3.912E-06 1.634E-06 6.615E-07 2.598E-07 9.893E-08 3.653E-08 1.308E-08 4.539E-09 1.528E-09 4.990E-10 1.583E-10 4.889E-11

	1.149E+01 1.180E+01	1.482E-11 4.490E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.898E-01 7.781E-01 6.705E-01 5.696E-01 4.775E-01 3.958E-01 3.074E-01 2.330E-01 1.724E-01 1.244E-01 8.751E-02 5.998E-02 4.006E-02 2.605E-02 1.649E-02 1.016E-02 6.096E-03 3.557E-03 2.019E-03 1.115E-03 5.986E-04 3.125E-04 1.586E-04 7.826E-05 3.754E-05 1.750E-05 7.926E-06 3.489E-06 1.493E-06 6.204E-07 2.505E-07 9.828E-08 3.746E-08 1.387E-08 4.989E-09 1.743E-09 5.922E-10 1.957E-10 6.302E-11 1.990E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 8.935E-01 7.853E-01 6.809E-01 5.825E-01 4.922E-01 4.114E-01 3.233E-01 2.484E-01 1.865E-01 1.368E-01 9.793E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.845E-02 4.668E-02 3.106E-02 2.015E-02 1.275E-02 7.859E-03 4.723E-03 2.766E-03 1.578E-03 8.770E-04 4.747E-04 2.503E-04 1.285E-04 6.423E-05 3.126E-05 1.481E-05 6.832E-06 3.067E-06 1.340E-06 5.700E-07 2.359E-07 9.504E-08 3.725E-08 1.421E-08 5.274E-09 1.905E-09 6.701E-10 2.296E-10 7.676E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 8.968E-01 7.920E-01 6.904E-01 5.944E-01 5.058E-01 4.261E-01 3.384E-01 2.631E-01 2.001E-01 1.489E-01 1.083E-01 7.706E-02 5.355E-02 3.636E-02 2.411E-02 1.561E-02 9.864E-03 6.085E-03 3.664E-03 2.152E-03 1.233E-03 6.896E-04 3.761E-04 2.000E-04 1.037E-04 5.247E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.587E-05 1.244E-05 5.830E-06 2.663E-06 1.186E-06 5.149E-07 2.179E-07 8.985E-08 3.611E-08 1.414E-08 5.399E-09 2.009E-09 7.287E-10 2.579E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.999E-01 7.981E-01 6.993E-01 6.055E-01 5.186E-01 4.399E-01 3.527E-01 2.771E-01 2.133E-01 1.608E-01 1.187E-01 8.575E-02 6.061E-02 4.190E-02 2.833E-02 1.873E-02 1.210E-02 7.644E-03 4.718E-03 2.845E-03 1.676E-03 9.646E-04 5.422E-04 2.976E-04 1.595E-04 8.351E-05 4.268E-05 2.130E-05 1.037E-05 4.932E-06 2.289E-06 1.037E-06 4.585E-07 1.979E-07 8.334E-08 3.425E-08 1.374E-08 5.378E-09 2.055E-09 7.663E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.027E-01 8.038E-01 7.075E-01 6.159E-01 5.306E-01 4.529E-01 3.662E-01 2.905E-01 2.261E-01 1.725E-01 1.290E-01 9.449E-02 6.781E-02 4.766E-02 3.280E-02 2.209E-02 1.456E-02 9.395E-03 5.930E-03 3.662E-03 2.211E-03 1.306E-03 7.545E-04 4.262E-04 2.354E-04 1.271E-04 6.707E-05 3.460E-05 1.745E-05 8.600E-06 4.143E-06 1.950E-06 8.973E-07 4.034E-07 1.772E-07 7.606E-08 3.190E-08 1.307E-08 5.234E-09 2.048E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.054E-01 8.090E-01 7.152E-01 6.255E-01 5.418E-01 4.651E-01 3.791E-01 3.034E-01 2.384E-01 1.839E-01 1.391E-01 1.032E-01 7.512E-02 5.359E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.747E-02 2.567E-02 1.724E-02 1.133E-02 7.301E-03 4.606E-03 2.845E-03 1.721E-03 1.019E-03 5.904E-04 3.350E-04 1.860E-04 1.011E-04 5.375E-05 2.797E-05 1.424E-05 7.096E-06 3.459E-06 1.649E-06 7.695E-07 3.512E-07 1.568E-07 6.846E-08 2.924E-08 1.222E-08 4.994E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.078E-01 8.140E-01 7.223E-01 6.346E-01 5.523E-01 4.767E-01 3.913E-01 3.157E-01 2.503E-01 1.950E-01 1.491E-01 1.120E-01 8.251E-02 5.967E-02 4.233E-02 2.946E-02 2.011E-02 1.346E-02 8.828E-03 5.679E-03 3.580E-03 2.212E-03 1.340E-03 7.950E-04 4.622E-04 2.633E-04 1.469E-04 8.031E-05 4.301E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.256E-05 1.159E-05 5.829E-06 2.872E-06 1.386E-06 6.548E-07 3.030E-07 1.373E-07 6.089E-08 2.645E-08 1.125E-08
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.101E-01 8.186E-01 7.290E-01 6.431E-01 5.623E-01 4.876E-01 4.029E-01 3.275E-01 2.618E-01 2.058E-01 1.589E-01 1.206E-01 8.994E-02 6.585E-02 4.735E-02 3.342E-02 2.316E-02 1.575E-02 1.051E-02 6.881E-03 4.421E-03 2.786E-03 1.722E-03 1.044E-03 6.207E-04 3.619E-04 2.069E-04 1.160E-04 6.376E-05 3.436E-05 1.815E-05 9.399E-06 4.771E-06 2.374E-06 1.158E-06 5.535E-07 2.593E-07 1.191E-07 5.359E-08 2.364E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.123E-01 8.229E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.353E-01 6.511E-01 5.716E-01 4.980E-01 4.140E-01 3.389E-01 2.730E-01 2.163E-01 1.686E-01 1.292E-01 9.738E-02 7.213E-02 5.250E-02 3.755E-02 2.638E-02 1.820E-02 1.234E-02 8.212E-03 5.367E-03 3.444E-03 2.169E-03 1.341E-03 8.141E-04 4.850E-04 2.835E-04 1.626E-04 9.156E-05 5.058E-05 2.741E-05 1.458E-05 7.606E-06 3.893E-06 1.955E-06 9.628E-07 4.652E-07 2.205E-07 1.025E-07 4.675E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.143E-01 8.269E-01 7.413E-01 6.587E-01 5.805E-01 5.079E-01 4.246E-01 3.498E-01 2.837E-01 2.266E-01 1.781E-01 1.378E-01 1.048E-01 7.847E-02 5.776E-02 4.181E-02 2.975E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.081E-02 1.431E-02 9.670E-03 6.421E-03 4.189E-03 2.685E-03 1.691E-03 1.046E-03 6.353E-04 3.791E-04 2.222E-04 1.279E-04 7.226E-05 4.010E-05 2.185E-05 1.169E-05 6.141E-06 3.167E-06 1.604E-06 7.972E-07 3.890E-07 1.863E-07 8.762E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.162E-01 8.308E-01 7.468E-01 6.658E-01 5.890E-01 5.172E-01 4.348E-01 3.602E-01 2.941E-01 2.366E-01 1.874E-01 1.462E-01 1.123E-01 8.486E-02 6.312E-02 4.620E-02 3.327E-02 2.357E-02 1.642E-02 1.125E-02 7.580E-03 5.022E-03 3.271E-03 2.095E-03 1.318E-03 8.157E-04 4.960E-04 2.965E-04 1.741E-04 1.005E-04 5.701E-05 3.177E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.740E-05 9.363E-06 4.950E-06 2.571E-06 1.312E-06 6.576E-07 3.238E-07 1.566E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.180E-01 8.344E-01 7.521E-01 6.726E-01 5.969E-01 5.261E-01 4.444E-01 3.703E-01 3.041E-01 2.463E-01 1.965E-01 1.545E-01 1.197E-01 9.127E-02 6.856E-02 5.070E-02 3.691E-02 2.645E-02 1.866E-02 1.295E-02 8.846E-03 5.944E-03 3.930E-03 2.556E-03 1.635E-03 1.029E-03 6.367E-04 3.875E-04 2.320E-04 1.365E-04 7.902E-05 4.497E-05 2.516E-05 1.384E-05 7.489E-06 3.982E-06 2.082E-06 1.070E-06 5.406E-07 2.685E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.197E-01 8.378E-01 7.572E-01 6.790E-01 6.045E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.347E-01 4.537E-01 3.799E-01 3.138E-01 2.557E-01 2.054E-01 1.627E-01 1.270E-01 9.770E-02 7.405E-02 5.530E-02 4.067E-02 2.947E-02 2.102E-02 1.477E-02 1.021E-02 6.955E-03 4.662E-03 3.076E-03 1.998E-03 1.277E-03 8.033E-04 4.973E-04 3.029E-04 1.816E-04 1.071E-04 6.213E-05 3.547E-05 1.992E-05 1.101E-05 5.983E-06 3.199E-06 1.683E-06 8.707E-07 4.431E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.220E-01 8.423E-01 7.637E-01 6.875E-01 6.146E-01 5.459E-01 4.660E-01 3.929E-01 3.269E-01 2.685E-01 2.176E-01 1.740E-01 1.372E-01 1.067E-01 8.182E-02 6.186E-02 4.611E-02 3.387E-02 2.452E-02 1.749E-02

	6.056E+00	1.230E-02
	6.358E+00	8.519E-03
	6.660E+00	5.813E-03
	6.963E+00	3.908E-03
	7.265E+00	2.588E-03
	7.567E+00	1.688E-03
	7.869E+00	1.084E-03
	8.171E+00	6.859E-04
	8.473E+00	4.273E-04
	8.775E+00	2.622E-04
	9.077E+00	1.584E-04
	9.379E+00	9.425E-05
	9.681E+00	5.521E-05
	9.983E+00	3.184E-05
	1.029E+01	1.808E-05
	1.059E+01	1.011E-05
	1.089E+01	5.565E-06
	1.119E+01	3.016E-06
	1.149E+01	1.609E-06
	1.180E+01	8.448E-07

NOTICE

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SENSITIVITY RUN #4
5-FOOT RECOMPACTED COHESIVE SOIL LINER
COEF. HYDRO. DISP. = $0.014 \text{ m}^2/\text{yr}$

Decrease by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens4

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.014 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.844E-01 2.423E-01 5.160E-02 6.292E-03 4.254E-04 1.444E-05 5.313E-07 1.238E-08 1.824E-10 1.861E-12 6.135E-14 1.305E-14 2.917E-15 5.798E-16 1.018E-16 1.570E-17 2.120E-18 2.492E-19 2.535E-20 2.217E-21 1.657E-22 1.050E-23 5.607E-25 2.506E-26 9.433E-28 3.211E-29 1.401E-30 1.251E-31 1.632E-32 2.152E-33 2.643E-34 2.985E-35 3.089E-36 2.923E-37 2.522E-38 1.978E-39 1.407E-40 9.052E-42 5.267E-43 2.789E-44
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.639E-01 3.963E-01 1.606E-01 4.975E-02 1.159E-02 1.863E-03 3.310E-04 4.707E-05 5.344E-06 4.832E-07 3.475E-08 1.985E-09 9.034E-11 3.460E-12

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.914E-13 4.165E-14 1.485E-14 5.228E-15 1.738E-15 5.432E-16 1.595E-16 4.393E-17 1.133E-17 2.730E-18 6.139E-19 1.285E-19 2.500E-20 4.507E-21 7.515E-22 1.156E-22 1.636E-23 2.125E-24 2.528E-25 2.750E-26 2.742E-27 2.549E-28 2.352E-29 2.559E-30 4.041E-31 8.744E-32
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.034E-01 4.850E-01 2.489E-01 1.072E-01 3.820E-02 1.048E-02 3.177E-03 8.323E-04 1.881E-04 3.661E-05 6.128E-06 8.812E-07 1.088E-07 1.151E-08 1.045E-09 8.166E-11 5.680E-12 4.495E-13 8.333E-14 3.221E-14 1.406E-14 6.001E-15 2.464E-15 9.716E-16 3.676E-16 1.333E-16 4.631E-17 1.539E-17 4.893E-18

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.485E-18 4.302E-19 1.187E-19 3.120E-20 7.795E-21 1.849E-21 4.160E-22 8.861E-23 1.785E-23 3.395E-24 6.091E-25
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.283E-01 5.442E-01 3.169E-01 1.620E-01 7.176E-02 2.594E-02 1.031E-02 3.680E-03 1.178E-03 3.373E-04 8.638E-05 1.976E-05 4.036E-06 7.352E-07 1.194E-07 1.728E-08 2.228E-09 2.562E-10 2.653E-11 2.615E-12 3.243E-13 8.386E-14 3.688E-14 1.801E-14 8.707E-15 4.095E-15 1.869E-15 8.270E-16 3.548E-16 1.474E-16 5.931E-17 2.309E-17 8.694E-18 3.164E-18 1.112E-18 3.770E-19 1.233E-19 3.887E-20 1.180E-20 3.445E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.458E-01 5.872E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.705E-01 2.106E-01 1.065E-01 4.566E-02 2.141E-02 9.217E-03 3.640E-03 1.317E-03 4.359E-04 1.320E-04 3.651E-05 9.223E-06 2.127E-06 4.475E-07 8.586E-08 1.502E-08 2.396E-09 3.487E-10 4.656E-11 5.859E-12 7.905E-13 1.648E-13 6.374E-14 3.233E-14 1.709E-14 8.914E-15 4.548E-15 2.265E-15 1.101E-15 5.220E-16 2.413E-16 1.087E-16 4.773E-17 2.041E-17 8.492E-18 3.439E-18 1.354E-18 5.184E-19
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.590E-01 6.203E-01 4.137E-01 2.530E-01 1.401E-01 6.742E-02 3.534E-02 1.726E-02 7.854E-03 3.323E-03 1.307E-03 4.773E-04 1.618E-04 5.087E-05 1.483E-05 4.007E-06 1.003E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.326E-07 4.994E-08 9.927E-09 1.827E-09 3.116E-10 4.948E-11 7.467E-12 1.168E-12 2.454E-13 8.845E-14 4.497E-14 2.501E-14 1.395E-14 7.661E-15 4.127E-15 2.179E-15 1.127E-15 5.710E-16 2.833E-16 1.376E-16 6.539E-17 3.040E-17 1.382E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.694E-01 6.468E-01 4.494E-01 2.898E-01 1.713E-01 8.980E-02 5.102E-02 2.730E-02 1.375E-02 6.514E-03 2.899E-03 1.211E-03 4.750E-04 1.747E-04 6.025E-05 1.947E-05 5.898E-06 1.673E-06 4.444E-07 1.105E-07 2.573E-08 5.608E-09 1.144E-09 2.188E-10 3.942E-11 6.829E-12 1.229E-12 2.834E-13 1.041E-13 5.366E-14 3.092E-14 1.807E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.046E-14 5.956E-15 3.335E-15 1.836E-15 9.926E-16 5.272E-16 2.750E-16 1.409E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.778E-01 6.684E-01 4.795E-01 3.220E-01 2.002E-01 1.120E-01 6.762E-02 3.878E-02 2.110E-02 1.088E-02 5.314E-03 2.458E-03 1.075E-03 4.451E-04 1.742E-04 6.442E-05 2.251E-05 7.431E-06 2.316E-06 6.818E-07 1.894E-07 4.968E-08 1.230E-08 2.873E-09 6.336E-10 1.322E-10 2.625E-11 5.084E-12 1.040E-12 2.723E-13 1.079E-13 5.769E-14 3.432E-14 2.080E-14 1.251E-14 7.431E-15 4.349E-15 2.507E-15 1.423E-15 7.955E-16
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.848E-01 6.866E-01 5.052E-01 3.503E-01 2.267E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.335E-01 8.459E-02 5.121E-02 2.959E-02 1.631E-02 8.568E-03 4.289E-03 2.045E-03 9.280E-04 4.007E-04 1.646E-04 6.432E-05 2.389E-05 8.437E-06 2.832E-06 9.030E-07 2.736E-07 7.874E-08 2.153E-08 5.590E-09 1.379E-09 3.234E-10 7.231E-11 1.555E-11 3.320E-12 7.713E-13 2.334E-13 1.026E-13 5.769E-14 3.542E-14 2.210E-14 1.371E-14 8.413E-15 5.095E-15 3.045E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.907E-01 7.021E-01 5.274E-01 3.755E-01 2.510E-01 1.542E-01 1.015E-01 6.421E-02 3.895E-02 2.265E-02 1.262E-02 6.731E-03 3.437E-03 1.679E-03 7.850E-04 3.508E-04 1.499E-04 6.121E-05 2.388E-05 8.904E-06

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.171E-06 1.079E-06 3.503E-07 1.086E-07 3.217E-08 9.095E-09 2.455E-09 6.329E-10 1.561E-10 3.696E-11 8.528E-12 2.000E-12 5.317E-13 1.884E-13 9.251E-14 5.489E-14 3.472E-14 2.221E-14 1.413E-14 8.898E-15
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.958E-01 7.155E-01 5.469E-01 3.980E-01 2.733E-01 1.739E-01 1.182E-01 7.750E-02 4.893E-02 2.973E-02 1.738E-02 9.770E-03 5.279E-03 2.741E-03 1.367E-03 6.545E-04 3.009E-04 1.328E-04 5.624E-05 2.285E-05 8.909E-06 3.331E-06 1.195E-06 4.109E-07 1.355E-07 4.284E-08 1.299E-08 3.774E-09 1.052E-09 2.813E-10 7.238E-11 1.805E-11 4.456E-12 1.157E-12 3.573E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.489E-13 8.109E-14 5.050E-14 3.281E-14 2.144E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.003E-01 7.273E-01 5.642E-01 4.182E-01 2.939E-01 1.925E-01 1.345E-01 9.088E-02 5.933E-02 3.740E-02 2.276E-02 1.337E-02 7.572E-03 4.136E-03 2.177E-03 1.105E-03 5.400E-04 2.542E-04 1.153E-04 5.034E-05 2.116E-05 8.564E-06 3.336E-06 1.250E-06 4.511E-07 1.566E-07 5.230E-08 1.680E-08 5.195E-09 1.545E-09 4.426E-10 1.222E-10 3.267E-11 8.560E-12 2.275E-12 6.654E-13 2.430E-13 1.180E-13 7.007E-14 4.541E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 9.042E-01 7.376E-01 5.796E-01 4.365E-01 3.129E-01 2.102E-01 1.503E-01 1.042E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.998E-02 4.553E-02 2.867E-02 1.748E-02 1.030E-02 5.875E-03 3.238E-03 1.725E-03 8.883E-04 4.419E-04 2.123E-04 9.853E-05 4.416E-05 1.911E-05 7.982E-06 3.219E-06 1.253E-06 4.707E-07 1.707E-07 5.971E-08 2.016E-08 6.568E-09 2.065E-09 6.268E-10 1.838E-10 5.224E-11 1.450E-11 4.013E-12 1.167E-12 3.943E-13 1.714E-13 9.478E-14
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 9.077E-01 7.469E-01 5.934E-01 4.532E-01 3.305E-01 2.270E-01 1.655E-01 1.173E-01 8.077E-02 5.398E-02 3.502E-02 2.203E-02 1.345E-02 7.955E-03 4.562E-03 2.535E-03 1.365E-03 7.116E-04 3.593E-04 1.757E-04 8.319E-05 3.813E-05 1.691E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.262E-06 3.017E-06 1.213E-06 4.719E-07 1.776E-07 6.469E-08 2.279E-08 7.766E-09 2.561E-09 8.170E-10 2.525E-10 7.569E-11 2.213E-11 6.402E-12 1.897E-12 6.197E-13 2.476E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 9.108E-01 7.552E-01 6.059E-01 4.685E-01 3.468E-01 2.429E-01 1.802E-01 1.302E-01 9.159E-02 6.267E-02 4.171E-02 2.698E-02 1.697E-02 1.037E-02 6.152E-03 3.546E-03 1.984E-03 1.078E-03 5.683E-04 2.908E-04 1.444E-04 6.955E-05 3.251E-05 1.474E-05 6.479E-06 2.763E-06 1.143E-06 4.582E-07 1.782E-07 6.718E-08 2.456E-08 8.703E-09 2.991E-09 9.966E-10 3.223E-10 1.013E-10 3.104E-11 9.371E-12

	1.149E+01 1.180E+01	2.856E-12 9.280E-13
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.136E-01 7.627E-01 6.173E-01 4.825E-01 3.620E-01 2.579E-01 1.943E-01 1.428E-01 1.024E-01 7.151E-02 4.867E-02 3.227E-02 2.083E-02 1.309E-02 8.006E-03 4.764E-03 2.758E-03 1.553E-03 8.503E-04 4.528E-04 2.344E-04 1.180E-04 5.770E-05 2.743E-05 1.267E-05 5.691E-06 2.483E-06 1.052E-06 4.335E-07 1.734E-07 6.741E-08 2.545E-08 9.336E-09 3.326E-09 1.152E-09 3.875E-10 1.269E-10 4.057E-11 1.275E-11 4.012E-12
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.162E-01 7.696E-01 6.278E-01 4.955E-01 3.763E-01 2.722E-01 2.079E-01 1.551E-01 1.130E-01 8.043E-02 5.585E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.783E-02 2.500E-02 1.611E-02 1.012E-02 6.192E-03 3.694E-03 2.147E-03 1.216E-03 6.704E-04 3.601E-04 1.883E-04 9.591E-05 4.756E-05 2.296E-05 1.079E-05 4.934E-06 2.197E-06 9.517E-07 4.013E-07 1.647E-07 6.576E-08 2.555E-08 9.660E-09 3.554E-09 1.273E-09 4.437E-10 1.508E-10 5.003E-11 1.632E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.185E-01 7.759E-01 6.374E-01 5.075E-01 3.896E-01 2.857E-01 2.209E-01 1.671E-01 1.236E-01 8.938E-02 6.318E-02 4.363E-02 2.943E-02 1.939E-02 1.247E-02 7.828E-03 4.796E-03 2.867E-03 1.672E-03 9.516E-04 5.282E-04 2.859E-04 1.509E-04 7.769E-05 3.899E-05 1.908E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	9.101E-06 4.232E-06 1.918E-06 8.476E-07 3.650E-07 1.532E-07 6.265E-08 2.497E-08 9.701E-09 3.672E-09 1.355E-09 4.876E-10 1.712E-10 5.877E-11
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.206E-01 7.817E-01 6.463E-01 5.187E-01 4.021E-01 2.986E-01 2.334E-01 1.787E-01 1.340E-01 9.832E-02 7.061E-02 4.962E-02 3.410E-02 2.291E-02 1.505E-02 9.665E-03 6.065E-03 3.719E-03 2.228E-03 1.304E-03 7.452E-04 4.160E-04 2.267E-04 1.207E-04 6.273E-05 3.183E-05 1.576E-05 7.622E-06 3.597E-06 1.657E-06 7.451E-07 3.270E-07 1.400E-07 5.852E-08 2.386E-08 9.498E-09 3.689E-09 1.398E-09 5.175E-10 1.871E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.226E-01 7.870E-01 6.546E-01 5.292E-01 4.139E-01 3.108E-01 2.453E-01 1.899E-01 1.441E-01 1.072E-01 7.811E-02 5.575E-02 3.896E-02 2.666E-02 1.785E-02 1.170E-02 7.501E-03 4.705E-03 2.887E-03 1.733E-03 1.017E-03 5.836E-04 3.275E-04 1.797E-04 9.635E-05 5.051E-05 2.588E-05 1.296E-05 6.344E-06 3.035E-06 1.418E-06 6.479E-07 2.892E-07 1.261E-07 5.374E-08 2.237E-08 9.101E-09 3.617E-09 1.405E-09 5.334E-10
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.245E-01 7.920E-01 6.623E-01 5.390E-01 4.251E-01 3.225E-01 2.568E-01 2.008E-01 1.541E-01 1.160E-01 8.565E-02 6.200E-02 4.399E-02 3.059E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.085E-02 1.392E-02 9.099E-03 5.827E-03 3.654E-03 2.244E-03 1.349E-03 7.938E-04 4.572E-04 2.578E-04 1.422E-04 7.680E-05 4.058E-05 2.098E-05 1.061E-05 5.252E-06 2.543E-06 1.205E-06 5.581E-07 2.530E-07 1.122E-07 4.864E-08 2.064E-08 8.562E-09 3.475E-09 1.380E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.262E-01 7.966E-01 6.695E-01 5.482E-01 4.356E-01 3.336E-01 2.679E-01 2.114E-01 1.639E-01 1.247E-01 9.318E-02 6.833E-02 4.916E-02 3.470E-02 2.402E-02 1.631E-02 1.085E-02 7.083E-03 4.531E-03 2.841E-03 1.745E-03 1.051E-03 6.199E-04 3.583E-04 2.029E-04 1.125E-04 6.114E-05 3.254E-05 1.696E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.658E-06 4.328E-06 2.119E-06 1.016E-06 4.769E-07 2.192E-07 9.868E-08 4.349E-08 1.876E-08 7.927E-09 3.279E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.278E-01 8.009E-01 6.762E-01 5.569E-01 4.456E-01 3.442E-01 2.785E-01 2.217E-01 1.734E-01 1.333E-01 1.007E-01 7.472E-02 5.445E-02 3.896E-02 2.736E-02 1.886E-02 1.276E-02 8.472E-03 5.518E-03 3.526E-03 2.210E-03 1.359E-03 8.192E-04 4.844E-04 2.808E-04 1.596E-04 8.898E-05 4.862E-05 2.605E-05 1.368E-05 7.041E-06 3.553E-06 1.757E-06 8.518E-07 4.047E-07 1.884E-07 8.599E-08 3.845E-08 1.685E-08 7.239E-09
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.293E-01 8.050E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.826E-01 5.651E-01 4.550E-01 3.544E-01 2.888E-01 2.316E-01 1.827E-01 1.418E-01 1.082E-01 8.115E-02 5.983E-02 4.334E-02 3.085E-02 2.157E-02 1.481E-02 9.991E-03 6.617E-03 4.302E-03 2.746E-03 1.721E-03 1.059E-03 6.391E-04 3.787E-04 2.202E-04 1.256E-04 7.033E-05 3.863E-05 2.082E-05 1.101E-05 5.711E-06 2.906E-06 1.451E-06 7.105E-07 3.413E-07 1.608E-07 7.431E-08 3.368E-08 1.498E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.307E-01 8.088E-01 6.886E-01 5.728E-01 4.641E-01 3.641E-01 2.986E-01 2.412E-01 1.918E-01 1.501E-01 1.156E-01 8.760E-02 6.528E-02 4.784E-02 3.447E-02 2.442E-02 1.700E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.163E-02 7.824E-03 5.170E-03 3.356E-03 2.141E-03 1.341E-03 8.254E-04 4.989E-04 2.962E-04 1.727E-04 9.885E-05 5.557E-05 3.067E-05 1.662E-05 8.846E-06 4.622E-06 2.370E-06 1.194E-06 5.900E-07 2.863E-07 1.364E-07 6.375E-08 2.926E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.320E-01 8.124E-01 6.942E-01 5.802E-01 4.727E-01 3.734E-01 3.081E-01 2.505E-01 2.007E-01 1.583E-01 1.230E-01 9.404E-02 7.078E-02 5.243E-02 3.821E-02 2.739E-02 1.932E-02 1.340E-02 9.139E-03 6.129E-03 4.042E-03 2.620E-03 1.670E-03 1.046E-03 6.440E-04 3.897E-04 2.317E-04 1.354E-04 7.778E-05 4.389E-05 2.434E-05 1.326E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.097E-06 3.732E-06 1.928E-06 9.786E-07 4.879E-07 2.390E-07 1.150E-07 5.434E-08
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.332E-01 8.158E-01 6.996E-01 5.872E-01 4.809E-01 3.824E-01 3.173E-01 2.596E-01 2.093E-01 1.664E-01 1.303E-01 1.005E-01 7.633E-02 5.710E-02 4.205E-02 3.049E-02 2.175E-02 1.528E-02 1.056E-02 7.179E-03 4.803E-03 3.161E-03 2.046E-03 1.303E-03 8.162E-04 5.027E-04 3.045E-04 1.814E-04 1.063E-04 6.121E-05 3.466E-05 1.930E-05 1.057E-05 5.686E-06 3.008E-06 1.565E-06 8.001E-07 4.021E-07 1.987E-07 9.649E-08
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.344E-01 8.190E-01 7.047E-01 5.938E-01 4.887E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.910E-01 3.261E-01 2.683E-01 2.178E-01 1.743E-01 1.375E-01 1.069E-01 8.190E-02 6.183E-02 4.598E-02 3.369E-02 2.430E-02 1.727E-02 1.208E-02 8.319E-03 5.641E-03 3.765E-03 2.473E-03 1.599E-03 1.018E-03 6.373E-04 3.927E-04 2.381E-04 1.421E-04 8.340E-05 4.817E-05 2.737E-05 1.530E-05 8.412E-06 4.550E-06 2.421E-06 1.267E-06 6.524E-07 3.304E-07 1.645E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.360E-01 8.233E-01 7.114E-01 6.027E-01 4.991E-01 4.025E-01 3.380E-01 2.802E-01 2.292E-01 1.851E-01 1.474E-01 1.158E-01 8.972E-02 6.854E-02 5.162E-02 3.832E-02 2.804E-02 2.022E-02 1.437E-02 1.006E-02

	6.056E+00	6.942E-03
	6.358E+00	4.718E-03
	6.660E+00	3.158E-03
	6.963E+00	2.083E-03
	7.265E+00	1.353E-03
	7.567E+00	8.652E-04
	7.869E+00	5.451E-04
	8.171E+00	3.381E-04
	8.473E+00	2.066E-04
	8.775E+00	1.243E-04
	9.077E+00	7.360E-05
	9.379E+00	4.292E-05
	9.681E+00	2.464E-05
	9.983E+00	1.393E-05
	1.029E+01	7.754E-06
	1.059E+01	4.248E-06
	1.089E+01	2.291E-06
	1.119E+01	1.217E-06
	1.149E+01	6.359E-07
	1.180E+01	3.272E-07

NOTICE

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SENSITIVITY RUN #5
5-FOOT RECOMPACTED COHESIVE SOIL LINER
ESTIMATED EFFECTIVE POROSITY = 0.32

Maximum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens5

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.32	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 5.795E-01 2.361E-01 6.697E-02 1.276E-02 1.596E-03 1.445E-04 7.658E-06 2.588E-07 5.542E-09 7.531E-11 7.803E-13 4.316E-14 9.765E-15 2.128E-15 4.116E-16 7.026E-17 1.054E-17 1.383E-18 1.578E-19 1.557E-20 1.321E-21 9.560E-23 5.863E-24 3.026E-25 1.307E-26 4.785E-28 1.645E-29 8.118E-31 8.168E-32 1.083E-32 1.411E-33 1.703E-34 1.889E-35 1.920E-36 1.784E-37 1.510E-38 1.162E-39 8.101E-41 5.111E-42 2.918E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 6.718E-01 3.777E-01 1.779E-01 6.918E-02 2.210E-02 6.340E-03 1.335E-03 2.260E-04 3.066E-05 3.323E-06 2.871E-07 1.973E-08 1.078E-09 4.713E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.810E-12 1.295E-13 3.447E-14 1.237E-14 4.294E-15 1.405E-15 4.327E-16 1.251E-16 3.392E-17 8.609E-18 2.042E-18 4.517E-19 9.302E-20 1.779E-20 3.154E-21 5.168E-22 7.810E-23 1.086E-23 1.385E-24 1.617E-25 1.727E-26 1.694E-27 1.562E-28 1.468E-29 1.711E-30 2.936E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.209E-01 4.616E-01 2.630E-01 1.324E-01 5.907E-02 2.507E-02 8.457E-03 2.475E-03 6.263E-04 1.368E-04 2.576E-05 4.174E-06 5.811E-07 6.948E-08 7.127E-09 6.275E-10 4.771E-11 3.307E-12 2.973E-13 6.925E-14 2.833E-14 1.233E-14 5.206E-15 2.114E-15 8.246E-16 3.085E-16 1.106E-16 3.801E-17 1.249E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.925E-18 1.178E-18 3.372E-19 9.199E-20 2.388E-20 5.895E-21 1.381E-21 3.069E-22 6.456E-23 1.284E-23 2.411E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 7.530E-01 5.189E-01 3.280E-01 1.895E-01 1.008E-01 5.214E-02 2.238E-02 8.650E-03 3.003E-03 9.350E-04 2.607E-04 6.504E-05 1.450E-05 2.886E-06 5.127E-07 8.122E-08 1.147E-08 1.444E-09 1.623E-10 1.653E-11 1.660E-12 2.366E-13 7.272E-14 3.348E-14 1.635E-14 7.842E-15 3.657E-15 1.654E-15 7.258E-16 3.086E-16 1.271E-16 5.070E-17 1.956E-17 7.300E-18 2.632E-18 9.166E-19 3.080E-19 9.982E-20 3.117E-20 9.371E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 7.762E-01 5.614E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.794E-01 2.392E-01 1.421E-01 8.279E-02 4.119E-02 1.886E-02 7.931E-03 3.061E-03 1.082E-03 3.504E-04 1.038E-04 2.809E-05 6.947E-06 1.569E-06 3.233E-07 6.077E-08 1.042E-08 1.629E-09 2.327E-10 3.059E-11 3.855E-12 5.563E-13 1.362E-13 5.820E-14 3.009E-14 1.586E-14 8.221E-15 4.165E-15 2.060E-15 9.938E-16 4.678E-16 2.147E-16 9.602E-17 4.184E-17 1.776E-17 7.335E-18 2.948E-18 1.152E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 7.941E-01 5.948E-01 4.214E-01 2.825E-01 1.809E-01 1.142E-01 6.279E-02 3.224E-02 1.543E-02 6.881E-03 2.854E-03 1.101E-03 3.944E-04 1.312E-04 4.048E-05 1.159E-05 3.074E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.559E-07 1.722E-07 3.633E-08 7.097E-09 1.284E-09 2.156E-10 3.378E-11 5.094E-12 8.336E-13 1.990E-13 8.052E-14 4.247E-14 2.369E-14 1.316E-14 7.183E-15 3.846E-15 2.018E-15 1.037E-15 5.223E-16 2.575E-16 1.243E-16 5.868E-17 2.711E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.085E-01 6.220E-01 4.567E-01 3.204E-01 2.167E-01 1.449E-01 8.569E-02 4.780E-02 2.512E-02 1.243E-02 5.784E-03 2.530E-03 1.039E-03 4.006E-04 1.449E-04 4.916E-05 1.563E-05 4.659E-06 1.301E-06 3.402E-07 8.331E-08 1.910E-08 4.100E-09 8.243E-10 1.555E-10 2.772E-11 4.808E-12 9.005E-13 2.318E-13 9.508E-14 5.121E-14 2.972E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.733E-14 9.976E-15 5.652E-15 3.148E-15 1.723E-15 9.266E-16 4.895E-16 2.539E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.204E-01 6.448E-01 4.869E-01 3.539E-01 2.495E-01 1.743E-01 1.089E-01 6.471E-02 3.651E-02 1.954E-02 9.918E-03 4.769E-03 2.171E-03 9.357E-04 3.815E-04 1.471E-04 5.359E-05 1.846E-05 6.005E-06 1.846E-06 5.356E-07 1.468E-07 3.797E-08 9.270E-09 2.137E-09 4.653E-10 9.593E-11 1.890E-11 3.681E-12 7.873E-13 2.284E-13 9.983E-14 5.563E-14 3.338E-14 2.019E-14 1.210E-14 7.151E-15 4.165E-15 2.389E-15 1.350E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.306E-01 6.643E-01 5.132E-01 3.836E-01 2.796E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.021E-01 1.319E-01 8.235E-02 4.911E-02 2.796E-02 1.519E-02 7.866E-03 3.882E-03 1.825E-03 8.167E-04 3.479E-04 1.410E-04 5.435E-05 1.992E-05 6.944E-06 2.300E-06 7.243E-07 2.167E-07 6.159E-08 1.663E-08 4.267E-09 1.040E-09 2.412E-10 5.340E-11 1.144E-11 2.471E-12 6.052E-13 2.023E-13 9.664E-14 5.624E-14 3.478E-14 2.167E-14 1.340E-14 8.186E-15 4.936E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.394E-01 6.813E-01 5.363E-01 4.104E-01 3.072E-01 2.283E-01 1.543E-01 1.003E-01 6.254E-02 3.742E-02 2.147E-02 1.180E-02 6.215E-03 3.132E-03 1.511E-03 6.973E-04 3.078E-04 1.299E-04 5.238E-05 2.019E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.439E-06 2.618E-06 8.800E-07 2.825E-07 8.663E-08 2.536E-08 7.090E-09 1.893E-09 4.828E-10 1.179E-10 2.772E-11 6.398E-12 1.534E-12 4.348E-13 1.693E-13 8.888E-14 5.407E-14 3.438E-14 2.196E-14 1.393E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.472E-01 6.963E-01 5.570E-01 4.345E-01 3.325E-01 2.527E-01 1.760E-01 1.182E-01 7.648E-02 4.768E-02 2.861E-02 1.652E-02 9.174E-03 4.897E-03 2.512E-03 1.238E-03 5.860E-04 2.663E-04 1.162E-04 4.865E-05 1.955E-05 7.537E-06 2.788E-06 9.889E-07 3.365E-07 1.098E-07 3.435E-08 1.030E-08 2.964E-09 8.178E-10 2.167E-10 5.531E-11 1.373E-11 3.416E-12 9.182E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.059E-13 1.386E-13 7.931E-14 5.023E-14 3.272E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.540E-01 7.097E-01 5.755E-01 4.564E-01 3.558E-01 2.757E-01 1.967E-01 1.358E-01 9.070E-02 5.852E-02 3.647E-02 2.194E-02 1.274E-02 7.134E-03 3.853E-03 2.006E-03 1.007E-03 4.867E-04 2.267E-04 1.017E-04 4.395E-05 1.828E-05 7.323E-06 2.824E-06 1.048E-06 3.742E-07 1.286E-07 4.254E-08 1.354E-08 4.145E-09 1.222E-09 3.467E-10 9.494E-11 2.524E-11 6.619E-12 1.791E-12 5.509E-13 2.180E-13 1.133E-13 6.955E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.602E-01 7.217E-01 5.922E-01 4.764E-01 3.774E-01 2.972E-01 2.166E-01 1.531E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.050E-01 6.976E-02 4.489E-02 2.797E-02 1.686E-02 9.837E-03 5.550E-03 3.027E-03 1.596E-03 8.135E-04 4.006E-04 1.906E-04 8.756E-05 3.885E-05 1.665E-05 6.889E-06 2.752E-06 1.061E-06 3.949E-07 1.419E-07 4.918E-08 1.645E-08 5.312E-09 1.656E-09 4.982E-10 1.450E-10 4.094E-11 1.134E-11 3.164E-12 9.501E-13 3.426E-13 1.605E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.658E-01 7.326E-01 6.075E-01 4.947E-01 3.973E-01 3.173E-01 2.355E-01 1.700E-01 1.193E-01 8.126E-02 5.376E-02 3.452E-02 2.150E-02 1.299E-02 7.609E-03 4.320E-03 2.377E-03 1.267E-03 6.545E-04 3.274E-04 1.586E-04 7.439E-05 3.378E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.485E-05 6.318E-06 2.602E-06 1.037E-06 3.998E-07 1.492E-07 5.385E-08 1.881E-08 6.356E-09 2.078E-09 6.578E-10 2.017E-10 6.008E-11 1.751E-11 5.081E-12 1.536E-12 5.267E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.708E-01 7.425E-01 6.214E-01 5.116E-01 4.159E-01 3.362E-01 2.536E-01 1.863E-01 1.334E-01 9.289E-02 6.296E-02 4.150E-02 2.659E-02 1.656E-02 1.002E-02 5.893E-03 3.365E-03 1.866E-03 1.004E-03 5.247E-04 2.661E-04 1.310E-04 6.254E-05 2.897E-05 1.302E-05 5.677E-06 2.400E-06 9.844E-07 3.915E-07 1.510E-07 5.646E-08 2.047E-08 7.198E-09 2.454E-09 8.115E-10 2.605E-10 8.132E-11 2.482E-11

	1.149E+01 1.180E+01	7.498E-12 2.314E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.755E-01 7.516E-01 6.343E-01 5.272E-01 4.331E-01 3.539E-01 2.708E-01 2.022E-01 1.473E-01 1.046E-01 7.239E-02 4.883E-02 3.208E-02 2.052E-02 1.278E-02 7.747E-03 4.570E-03 2.622E-03 1.464E-03 7.947E-04 4.195E-04 2.153E-04 1.075E-04 5.213E-05 2.458E-05 1.127E-05 5.018E-06 2.172E-06 9.133E-07 3.732E-07 1.481E-07 5.714E-08 2.141E-08 7.793E-09 2.756E-09 9.472E-10 3.165E-10 1.030E-10 3.277E-11 1.029E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 8.797E-01 7.599E-01 6.461E-01 5.416E-01 4.492E-01 3.707E-01 2.872E-01 2.174E-01 1.609E-01 1.162E-01 8.199E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.644E-02 3.791E-02 2.483E-02 1.586E-02 9.879E-03 5.997E-03 3.547E-03 2.045E-03 1.148E-03 6.281E-04 3.346E-04 1.736E-04 8.773E-05 4.316E-05 2.067E-05 9.639E-06 4.375E-06 1.933E-06 8.312E-07 3.479E-07 1.417E-07 5.616E-08 2.166E-08 8.132E-09 2.971E-09 1.056E-09 3.658E-10 1.235E-10 4.080E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 8.836E-01 7.676E-01 6.570E-01 5.551E-01 4.643E-01 3.864E-01 3.028E-01 2.322E-01 1.742E-01 1.278E-01 9.169E-02 6.428E-02 4.403E-02 2.946E-02 1.925E-02 1.228E-02 7.647E-03 4.648E-03 2.757E-03 1.595E-03 9.007E-04 4.960E-04 2.665E-04 1.396E-04 7.131E-05 3.552E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.725E-05 8.170E-06 3.771E-06 1.697E-06 7.445E-07 3.183E-07 1.326E-07 5.387E-08 2.133E-08 8.227E-09 3.093E-09 1.134E-09 4.054E-10 1.415E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.873E-01 7.747E-01 6.672E-01 5.677E-01 4.784E-01 4.013E-01 3.176E-01 2.464E-01 1.872E-01 1.393E-01 1.014E-01 7.228E-02 5.039E-02 3.436E-02 2.291E-02 1.494E-02 9.517E-03 5.927E-03 3.606E-03 2.144E-03 1.245E-03 7.065E-04 3.915E-04 2.118E-04 1.119E-04 5.776E-05 2.910E-05 1.431E-05 6.871E-06 3.220E-06 1.473E-06 6.579E-07 2.867E-07 1.220E-07 5.063E-08 2.051E-08 8.110E-09 3.129E-09 1.179E-09 4.336E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.906E-01 7.814E-01 6.767E-01 5.794E-01 4.917E-01 4.153E-01 3.318E-01 2.601E-01 1.999E-01 1.506E-01 1.112E-01 8.040E-02 5.696E-02 3.951E-02 2.683E-02 1.783E-02 1.160E-02 7.385E-03 4.599E-03 2.801E-03 1.669E-03 9.727E-04 5.542E-04 3.088E-04 1.682E-04 8.960E-05 4.665E-05 2.374E-05 1.181E-05 5.741E-06 2.728E-06 1.267E-06 5.748E-07 2.549E-07 1.104E-07 4.676E-08 1.934E-08 7.819E-09 3.089E-09 1.192E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 8.938E-01 7.876E-01 6.856E-01 5.904E-01 5.042E-01 4.286E-01 3.454E-01 2.732E-01 2.122E-01 1.617E-01 1.209E-01 8.860E-02 6.368E-02 4.487E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.098E-02 2.096E-02 1.389E-02 9.020E-03 5.736E-03 3.572E-03 2.178E-03 1.300E-03 7.600E-04 4.348E-04 2.435E-04 1.335E-04 7.159E-05 3.758E-05 1.930E-05 9.700E-06 4.770E-06 2.295E-06 1.080E-06 4.973E-07 2.240E-07 9.870E-08 4.254E-08 1.794E-08 7.397E-09 2.984E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.967E-01 7.933E-01 6.939E-01 6.008E-01 5.160E-01 4.413E-01 3.583E-01 2.859E-01 2.242E-01 1.726E-01 1.305E-01 9.684E-02 7.053E-02 5.040E-02 3.533E-02 2.429E-02 1.638E-02 1.083E-02 7.019E-03 4.460E-03 2.777E-03 1.695E-03 1.014E-03 5.942E-04 3.412E-04 1.920E-04 1.058E-04 5.711E-05 3.020E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.564E-05 7.937E-06 3.943E-06 1.919E-06 9.143E-07 4.266E-07 1.949E-07 8.722E-08 3.821E-08 1.639E-08 6.885E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.994E-01 7.988E-01 7.017E-01 6.105E-01 5.272E-01 4.532E-01 3.707E-01 2.982E-01 2.358E-01 1.833E-01 1.400E-01 1.051E-01 7.748E-02 5.609E-02 3.987E-02 2.782E-02 1.905E-02 1.281E-02 8.447E-03 5.466E-03 3.470E-03 2.161E-03 1.320E-03 7.910E-04 4.647E-04 2.678E-04 1.513E-04 8.380E-05 4.551E-05 2.423E-05 1.265E-05 6.472E-06 3.246E-06 1.596E-06 7.692E-07 3.633E-07 1.682E-07 7.631E-08 3.393E-08 1.479E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.020E-01 8.039E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.090E-01 6.197E-01 5.378E-01 4.646E-01 3.825E-01 3.099E-01 2.471E-01 1.938E-01 1.495E-01 1.133E-01 8.449E-02 6.190E-02 4.456E-02 3.152E-02 2.190E-02 1.495E-02 1.002E-02 6.593E-03 4.260E-03 2.703E-03 1.683E-03 1.029E-03 6.175E-04 3.636E-04 2.102E-04 1.192E-04 6.634E-05 3.623E-05 1.941E-05 1.020E-05 5.263E-06 2.663E-06 1.322E-06 6.437E-07 3.074E-07 1.440E-07 6.620E-08 2.984E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.044E-01 8.086E-01 7.159E-01 6.284E-01 5.478E-01 4.755E-01 3.938E-01 3.213E-01 2.581E-01 2.040E-01 1.588E-01 1.216E-01 9.155E-02 6.782E-02 4.940E-02 3.538E-02 2.491E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.724E-02 1.173E-02 7.839E-03 5.148E-03 3.322E-03 2.106E-03 1.312E-03 8.026E-04 4.823E-04 2.847E-04 1.650E-04 9.391E-05 5.249E-05 2.881E-05 1.553E-05 8.217E-06 4.269E-06 2.177E-06 1.090E-06 5.360E-07 2.587E-07 1.226E-07 5.700E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.067E-01 8.132E-01 7.225E-01 6.366E-01 5.573E-01 4.858E-01 4.047E-01 3.322E-01 2.687E-01 2.141E-01 1.679E-01 1.297E-01 9.864E-02 7.382E-02 5.436E-02 3.938E-02 2.807E-02 1.968E-02 1.357E-02 9.202E-03 6.136E-03 4.023E-03 2.593E-03 1.643E-03 1.023E-03 6.264E-04 3.769E-04 2.229E-04 1.295E-04 7.399E-05 4.152E-05 2.290E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.241E-05 6.605E-06 3.455E-06 1.775E-06 8.963E-07 4.445E-07 2.166E-07 1.037E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.089E-01 8.174E-01 7.287E-01 6.444E-01 5.663E-01 4.956E-01 4.151E-01 3.428E-01 2.790E-01 2.239E-01 1.770E-01 1.378E-01 1.057E-01 7.988E-02 5.942E-02 4.352E-02 3.137E-02 2.226E-02 1.555E-02 1.068E-02 7.223E-03 4.805E-03 3.145E-03 2.025E-03 1.282E-03 7.986E-04 4.892E-04 2.947E-04 1.746E-04 1.017E-04 5.828E-05 3.283E-05 1.818E-05 9.902E-06 5.301E-06 2.790E-06 1.444E-06 7.345E-07 3.673E-07 1.805E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.109E-01 8.215E-01 7.345E-01 6.518E-01 5.749E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.051E-01 4.251E-01 3.529E-01 2.890E-01 2.334E-01 1.858E-01 1.459E-01 1.128E-01 8.599E-02 6.457E-02 4.776E-02 3.480E-02 2.497E-02 1.764E-02 1.228E-02 8.409E-03 5.670E-03 3.764E-03 2.460E-03 1.582E-03 1.001E-03 6.236E-04 3.823E-04 2.306E-04 1.368E-04 7.991E-05 4.591E-05 2.595E-05 1.443E-05 7.896E-06 4.250E-06 2.250E-06 1.172E-06 6.003E-07 3.025E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.136E-01 8.268E-01 7.422E-01 6.616E-01 5.863E-01 5.175E-01 4.384E-01 3.666E-01 3.026E-01 2.464E-01 1.980E-01 1.570E-01 1.227E-01 9.459E-02 7.189E-02 5.387E-02 3.979E-02 2.896E-02 2.078E-02 1.469E-02

	6.056E+00	1.023E-02
	6.358E+00	7.022E-03
	6.660E+00	4.747E-03
	6.963E+00	3.162E-03
	7.265E+00	2.074E-03
	7.567E+00	1.340E-03
	7.869E+00	8.529E-04
	8.171E+00	5.346E-04
	8.473E+00	3.299E-04
	8.775E+00	2.005E-04
	9.077E+00	1.200E-04
	9.379E+00	7.074E-05
	9.681E+00	4.105E-05
	9.983E+00	2.345E-05
	1.029E+01	1.319E-05
	1.059E+01	7.307E-06
	1.089E+01	3.984E-06
	1.119E+01	2.139E-06
	1.149E+01	1.130E-06
	1.180E+01	5.879E-07

NOTICE

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SENSITIVITY RUN #6
5-FOOT RECOMPACTED COHESIVE SOIL LINER
ESTIMATED EFFECTIVE POROSITY = 0.21

Minimum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens6

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.21	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.897E-01 2.918E-01 8.545E-02 1.672E-02 2.136E-03 1.602E-04 8.591E-06 2.930E-07 6.325E-09 8.645E-11 8.830E-13 4.518E-14 1.021E-14 2.242E-15 4.368E-16 7.508E-17 1.134E-17 1.497E-18 1.718E-19 1.705E-20 1.454E-21 1.058E-22 6.520E-24 3.380E-25 1.467E-26 5.382E-28 1.841E-29 8.887E-31 8.798E-32 1.167E-32 1.524E-33 1.846E-34 2.055E-35 2.096E-36 1.954E-37 1.660E-38 1.281E-39 8.961E-41 5.670E-42 3.246E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.683E-01 4.444E-01 2.148E-01 8.549E-02 2.761E-02 6.637E-03 1.416E-03 2.425E-04 3.323E-05 3.634E-06 3.164E-07 2.190E-08 1.204E-09 5.286E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.014E-12 1.350E-13 3.467E-14 1.247E-14 4.353E-15 1.433E-15 4.434E-16 1.289E-16 3.511E-17 8.955E-18 2.134E-18 4.743E-19 9.812E-20 1.885E-20 3.356E-21 5.523E-22 8.381E-23 1.170E-23 1.498E-24 1.755E-25 1.881E-26 1.851E-27 1.707E-28 1.594E-29 1.824E-30 3.074E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.073E-01 5.290E-01 3.081E-01 1.579E-01 7.017E-02 2.532E-02 8.650E-03 2.560E-03 6.546E-04 1.444E-04 2.741E-05 4.476E-06 6.276E-07 7.552E-08 7.793E-09 6.897E-10 5.264E-11 3.633E-12 3.132E-13 6.887E-14 2.790E-14 1.217E-14 5.165E-15 2.107E-15 8.252E-16 3.101E-16 1.117E-16 3.852E-17 1.271E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.010E-18 1.208E-18 3.472E-19 9.508E-20 2.478E-20 6.139E-21 1.444E-21 3.219E-22 6.795E-23 1.356E-23 2.555E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.318E-01 5.846E-01 3.762E-01 2.200E-01 1.152E-01 5.137E-02 2.231E-02 8.716E-03 3.056E-03 9.604E-04 2.701E-04 6.791E-05 1.525E-05 3.057E-06 5.464E-07 8.707E-08 1.236E-08 1.564E-09 1.766E-10 1.801E-11 1.790E-12 2.433E-13 7.126E-14 3.250E-14 1.590E-14 7.654E-15 3.582E-15 1.627E-15 7.163E-16 3.057E-16 1.264E-16 5.058E-17 1.959E-17 7.334E-18 2.654E-18 9.272E-19 3.126E-19 1.016E-19 3.184E-20 9.605E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.490E-01 6.246E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.282E-01 2.717E-01 1.575E-01 8.008E-02 4.027E-02 1.862E-02 7.908E-03 3.079E-03 1.098E-03 3.582E-04 1.069E-04 2.913E-05 7.250E-06 1.647E-06 3.413E-07 6.450E-08 1.111E-08 1.746E-09 2.504E-10 3.300E-11 4.142E-12 5.817E-13 1.349E-13 5.608E-14 2.889E-14 1.526E-14 7.936E-15 4.033E-15 2.001E-15 9.688E-16 4.574E-16 2.106E-16 9.449E-17 4.131E-17 1.758E-17 7.286E-18 2.937E-18 1.151E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.619E-01 6.550E-01 4.693E-01 3.150E-01 1.957E-01 1.089E-01 6.048E-02 3.134E-02 1.514E-02 6.808E-03 2.847E-03 1.106E-03 3.991E-04 1.337E-04 4.151E-05 1.195E-05 3.189E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.884E-07 1.805E-07 3.827E-08 7.511E-09 1.365E-09 2.300E-10 3.613E-11 5.434E-12 8.717E-13 1.985E-13 7.741E-14 4.043E-14 2.256E-14 1.256E-14 6.878E-15 3.693E-15 1.944E-15 1.002E-15 5.060E-16 2.502E-16 1.211E-16 5.734E-17 2.656E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.719E-01 6.791E-01 5.027E-01 3.515E-01 2.298E-01 1.366E-01 8.154E-02 4.589E-02 2.432E-02 1.213E-02 5.689E-03 2.506E-03 1.036E-03 4.022E-04 1.464E-04 4.996E-05 1.598E-05 4.787E-06 1.344E-06 3.531E-07 8.686E-08 2.000E-08 4.312E-09 8.704E-10 1.647E-10 2.942E-11 5.088E-12 9.357E-13 2.308E-13 9.115E-14 4.846E-14 2.809E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.641E-14 9.472E-15 5.380E-15 3.005E-15 1.649E-15 8.891E-16 4.709E-16 2.449E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.801E-01 6.987E-01 5.304E-01 3.828E-01 2.602E-01 1.628E-01 1.026E-01 6.147E-02 3.496E-02 1.885E-02 9.639E-03 4.667E-03 2.139E-03 9.278E-04 3.805E-04 1.475E-04 5.407E-05 1.872E-05 6.122E-06 1.891E-06 5.513E-07 1.517E-07 3.942E-08 9.664E-09 2.236E-09 4.886E-10 1.010E-10 1.994E-11 3.865E-12 8.101E-13 2.256E-13 9.519E-14 5.236E-14 3.136E-14 1.900E-14 1.141E-14 6.760E-15 3.946E-15 2.269E-15 1.285E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.868E-01 7.150E-01 5.538E-01 4.100E-01 2.874E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.873E-01 1.233E-01 7.753E-02 4.659E-02 2.672E-02 1.461E-02 7.619E-03 3.784E-03 1.790E-03 8.057E-04 3.451E-04 1.406E-04 5.450E-05 2.008E-05 7.032E-06 2.340E-06 7.402E-07 2.224E-07 6.347E-08 1.721E-08 4.431E-09 1.084E-09 2.521E-10 5.596E-11 1.198E-11 2.571E-12 6.149E-13 1.975E-13 9.150E-14 5.266E-14 3.251E-14 2.029E-14 1.257E-14 7.694E-15 4.650E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.925E-01 7.289E-01 5.740E-01 4.337E-01 3.120E-01 2.101E-01 1.432E-01 9.369E-02 5.885E-02 3.546E-02 2.048E-02 1.133E-02 6.002E-03 3.043E-03 1.476E-03 6.851E-04 3.040E-04 1.289E-04 5.226E-05 2.024E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.491E-06 2.648E-06 8.938E-07 2.881E-07 8.869E-08 2.606E-08 7.313E-09 1.959E-09 5.013E-10 1.227E-10 2.891E-11 6.659E-12 1.578E-12 4.349E-13 1.631E-13 8.351E-14 5.039E-14 3.200E-14 2.047E-14 1.300E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.974E-01 7.409E-01 5.915E-01 4.547E-01 3.341E-01 2.314E-01 1.622E-01 1.097E-01 7.147E-02 4.485E-02 2.708E-02 1.573E-02 8.788E-03 4.718E-03 2.434E-03 1.206E-03 5.737E-04 2.620E-04 1.149E-04 4.832E-05 1.950E-05 7.552E-06 2.805E-06 9.991E-07 3.412E-07 1.118E-07 3.509E-08 1.056E-08 3.049E-09 8.441E-10 2.243E-10 5.737E-11 1.425E-11 3.527E-12 9.322E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.005E-13 1.317E-13 7.399E-14 4.660E-14 3.035E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.016E-01 7.513E-01 6.070E-01 4.735E-01 3.543E-01 2.511E-01 1.804E-01 1.254E-01 8.423E-02 5.469E-02 3.429E-02 2.075E-02 1.211E-02 6.822E-03 3.704E-03 1.939E-03 9.776E-04 4.750E-04 2.223E-04 1.002E-04 4.348E-05 1.817E-05 7.306E-06 2.828E-06 1.054E-06 3.777E-07 1.303E-07 4.324E-08 1.381E-08 4.242E-09 1.254E-09 3.569E-10 9.798E-11 2.608E-11 6.827E-12 1.830E-12 5.498E-13 2.102E-13 1.064E-13 6.449E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 9.053E-01 7.605E-01 6.207E-01 4.904E-01 3.727E-01 2.696E-01 1.977E-01 1.406E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	9.699E-02 6.482E-02 4.195E-02 2.628E-02 1.594E-02 9.345E-03 5.300E-03 2.905E-03 1.539E-03 7.882E-04 3.899E-04 1.863E-04 8.597E-05 3.831E-05 1.648E-05 6.847E-06 2.745E-06 1.063E-06 3.969E-07 1.431E-07 4.976E-08 1.670E-08 5.410E-09 1.691E-09 5.104E-10 1.489E-10 4.212E-11 1.166E-11 3.237E-12 9.569E-13 3.351E-13 1.521E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 9.087E-01 7.687E-01 6.331E-01 5.057E-01 3.896E-01 2.868E-01 2.141E-01 1.554E-01 1.096E-01 7.512E-02 4.997E-02 3.226E-02 2.020E-02 1.227E-02 7.221E-03 4.120E-03 2.278E-03 1.220E-03 6.328E-04 3.179E-04 1.547E-04 7.284E-05 3.321E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.465E-05 6.258E-06 2.586E-06 1.034E-06 4.002E-07 1.498E-07 5.427E-08 1.902E-08 6.446E-09 2.114E-09 6.709E-10 2.063E-10 6.156E-11 1.794E-11 5.194E-12 1.553E-12 5.208E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 9.116E-01 7.761E-01 6.442E-01 5.197E-01 4.052E-01 3.029E-01 2.297E-01 1.697E-01 1.221E-01 8.550E-02 5.824E-02 3.859E-02 2.485E-02 1.556E-02 9.460E-03 5.588E-03 3.205E-03 1.785E-03 9.651E-04 5.064E-04 2.579E-04 1.274E-04 6.108E-05 2.841E-05 1.281E-05 5.607E-06 2.379E-06 9.789E-07 3.906E-07 1.511E-07 5.669E-08 2.062E-08 7.271E-09 2.486E-09 8.244E-10 2.653E-10 8.299E-11 2.535E-11

	1.149E+01 1.180E+01	7.648E-12 2.344E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.143E-01 7.828E-01 6.544E-01 5.325E-01 4.197E-01 3.180E-01 2.445E-01 1.835E-01 1.343E-01 9.586E-02 6.669E-02 4.520E-02 2.984E-02 1.918E-02 1.200E-02 7.308E-03 4.330E-03 2.495E-03 1.399E-03 7.625E-04 4.042E-04 2.083E-04 1.043E-04 5.081E-05 2.404E-05 1.106E-05 4.942E-06 2.146E-06 9.055E-07 3.712E-07 1.478E-07 5.718E-08 2.149E-08 7.845E-09 2.782E-09 9.587E-10 3.212E-10 1.047E-10 3.336E-11 1.047E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.168E-01 7.889E-01 6.637E-01 5.443E-01 4.331E-01 3.322E-01 2.585E-01 1.967E-01 1.462E-01 1.062E-01 7.524E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.204E-02 3.511E-02 2.311E-02 1.483E-02 9.274E-03 5.654E-03 3.359E-03 1.944E-03 1.096E-03 6.019E-04 3.219E-04 1.677E-04 8.502E-05 4.197E-05 2.017E-05 9.439E-06 4.298E-06 1.905E-06 8.219E-07 3.450E-07 1.410E-07 5.603E-08 2.168E-08 8.159E-09 2.989E-09 1.066E-09 3.699E-10 1.252E-10 4.140E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.190E-01 7.945E-01 6.722E-01 5.552E-01 4.457E-01 3.455E-01 2.719E-01 2.095E-01 1.579E-01 1.164E-01 8.385E-02 5.905E-02 4.062E-02 2.730E-02 1.791E-02 1.148E-02 7.177E-03 4.380E-03 2.608E-03 1.515E-03 8.589E-04 4.748E-04 2.560E-04 1.346E-04 6.899E-05 3.448E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.681E-05 7.984E-06 3.697E-06 1.669E-06 7.343E-07 3.149E-07 1.316E-07 5.360E-08 2.128E-08 8.231E-09 3.103E-09 1.140E-09 4.086E-10 1.429E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.211E-01 7.996E-01 6.802E-01 5.653E-01 4.574E-01 3.582E-01 2.847E-01 2.217E-01 1.692E-01 1.264E-01 9.246E-02 6.617E-02 4.633E-02 3.173E-02 2.124E-02 1.390E-02 8.896E-03 5.562E-03 3.397E-03 2.028E-03 1.182E-03 6.731E-04 3.743E-04 2.033E-04 1.078E-04 5.580E-05 2.820E-05 1.391E-05 6.702E-06 3.151E-06 1.446E-06 6.475E-07 2.830E-07 1.207E-07 5.025E-08 2.041E-08 8.091E-09 3.130E-09 1.182E-09 4.358E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.230E-01 8.044E-01 6.875E-01 5.748E-01 4.685E-01 3.701E-01 2.968E-01 2.335E-01 1.802E-01 1.363E-01 1.010E-01 7.338E-02 5.220E-02 3.635E-02 2.479E-02 1.654E-02 1.080E-02 6.902E-03 4.315E-03 2.638E-03 1.578E-03 9.226E-04 5.276E-04 2.950E-04 1.612E-04 8.615E-05 4.500E-05 2.297E-05 1.146E-05 5.589E-06 2.664E-06 1.240E-06 5.645E-07 2.510E-07 1.091E-07 4.630E-08 1.920E-08 7.782E-09 3.081E-09 1.192E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.248E-01 8.088E-01 6.944E-01 5.837E-01 4.788E-01 3.814E-01 3.084E-01 2.449E-01 1.909E-01 1.460E-01 1.096E-01 8.064E-02 5.818E-02 4.115E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.852E-02 1.937E-02 1.289E-02 8.400E-03 5.362E-03 3.351E-03 2.051E-03 1.229E-03 7.205E-04 4.136E-04 2.324E-04 1.278E-04 6.875E-05 3.620E-05 1.865E-05 9.401E-06 4.636E-06 2.237E-06 1.056E-06 4.875E-07 2.202E-07 9.727E-08 4.203E-08 1.777E-08 7.345E-09 2.971E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.264E-01 8.130E-01 7.008E-01 5.920E-01 4.886E-01 3.922E-01 3.195E-01 2.558E-01 2.013E-01 1.555E-01 1.180E-01 8.791E-02 6.427E-02 4.610E-02 3.244E-02 2.238E-02 1.515E-02 1.005E-02 6.538E-03 4.169E-03 2.605E-03 1.595E-03 9.574E-04 5.629E-04 3.243E-04 1.830E-04 1.012E-04 5.479E-05 2.906E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.510E-05 7.681E-06 3.827E-06 1.867E-06 8.922E-07 4.174E-07 1.912E-07 8.578E-08 3.768E-08 1.620E-08 6.821E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.280E-01 8.169E-01 7.068E-01 5.999E-01 4.979E-01 4.024E-01 3.301E-01 2.664E-01 2.113E-01 1.649E-01 1.264E-01 9.519E-02 7.042E-02 5.116E-02 3.650E-02 2.556E-02 1.757E-02 1.185E-02 7.842E-03 5.092E-03 3.244E-03 2.027E-03 1.242E-03 7.466E-04 4.401E-04 2.543E-04 1.441E-04 8.008E-05 4.362E-05 2.329E-05 1.219E-05 6.256E-06 3.147E-06 1.551E-06 7.495E-07 3.549E-07 1.647E-07 7.492E-08 3.340E-08 1.459E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.294E-01 8.205E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.125E-01 6.073E-01 5.067E-01 4.122E-01 3.402E-01 2.765E-01 2.211E-01 1.740E-01 1.346E-01 1.024E-01 7.662E-02 5.633E-02 4.069E-02 2.888E-02 2.013E-02 1.379E-02 9.272E-03 6.122E-03 3.969E-03 2.526E-03 1.578E-03 9.680E-04 5.826E-04 3.442E-04 1.995E-04 1.135E-04 6.334E-05 3.469E-05 1.864E-05 9.825E-06 5.081E-06 2.578E-06 1.283E-06 6.262E-07 2.999E-07 1.408E-07 6.489E-08 2.932E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.308E-01 8.239E-01 7.178E-01 6.143E-01 5.151E-01 4.215E-01 3.500E-01 2.863E-01 2.306E-01 1.829E-01 1.428E-01 1.097E-01 8.285E-02 6.157E-02 4.500E-02 3.234E-02 2.284E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.586E-02 1.082E-02 7.258E-03 4.782E-03 3.096E-03 1.969E-03 1.230E-03 7.548E-04 4.549E-04 2.693E-04 1.565E-04 8.935E-05 5.008E-05 2.757E-05 1.490E-05 7.903E-06 4.117E-06 2.105E-06 1.057E-06 5.208E-07 2.520E-07 1.197E-07 5.578E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.321E-01 8.272E-01 7.229E-01 6.210E-01 5.230E-01 4.304E-01 3.593E-01 2.957E-01 2.398E-01 1.916E-01 1.508E-01 1.168E-01 8.909E-02 6.688E-02 4.941E-02 3.591E-02 2.568E-02 1.806E-02 1.249E-02 8.497E-03 5.684E-03 3.738E-03 2.416E-03 1.536E-03 9.593E-04 5.890E-04 3.554E-04 2.108E-04 1.228E-04 7.035E-05 3.959E-05 2.189E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.189E-05 6.347E-06 3.328E-06 1.714E-06 8.677E-07 4.314E-07 2.107E-07 1.011E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.333E-01 8.302E-01 7.277E-01 6.273E-01 5.306E-01 4.389E-01 3.683E-01 3.048E-01 2.488E-01 2.001E-01 1.586E-01 1.239E-01 9.533E-02 7.224E-02 5.390E-02 3.959E-02 2.863E-02 2.038E-02 1.427E-02 9.839E-03 6.673E-03 4.452E-03 2.922E-03 1.887E-03 1.198E-03 7.486E-04 4.599E-04 2.778E-04 1.651E-04 9.642E-05 5.539E-05 3.128E-05 1.737E-05 9.483E-06 5.090E-06 2.685E-06 1.393E-06 7.103E-07 3.560E-07 1.754E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.344E-01 8.331E-01 7.322E-01 6.333E-01 5.378E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.470E-01 3.769E-01 3.136E-01 2.574E-01 2.084E-01 1.664E-01 1.309E-01 1.016E-01 7.762E-02 5.846E-02 4.337E-02 3.169E-02 2.281E-02 1.616E-02 1.128E-02 7.749E-03 5.240E-03 3.489E-03 2.286E-03 1.474E-03 9.358E-04 5.845E-04 3.593E-04 2.173E-04 1.293E-04 7.570E-05 4.361E-05 2.471E-05 1.378E-05 7.556E-06 4.076E-06 2.163E-06 1.129E-06 5.798E-07 2.928E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.360E-01 8.370E-01 7.382E-01 6.413E-01 5.474E-01 4.579E-01 3.885E-01 3.254E-01 2.692E-01 2.197E-01 1.770E-01 1.406E-01 1.102E-01 8.520E-02 6.494E-02 4.879E-02 3.614E-02 2.638E-02 1.898E-02 1.345E-02

	6.056E+00	9.398E-03
	6.358E+00	6.468E-03
	6.660E+00	4.385E-03
	6.963E+00	2.928E-03
	7.265E+00	1.926E-03
	7.567E+00	1.248E-03
	7.869E+00	7.964E-04
	8.171E+00	5.005E-04
	8.473E+00	3.097E-04
	8.775E+00	1.887E-04
	9.077E+00	1.132E-04
	9.379E+00	6.691E-05
	9.681E+00	3.892E-05
	9.983E+00	2.229E-05
	1.029E+01	1.257E-05
	1.059E+01	6.979E-06
	1.089E+01	3.814E-06
	1.119E+01	2.052E-06
	1.149E+01	1.087E-06
	1.180E+01	5.666E-07

NOTICE

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SENSITIVITY RUN #7
WADSWORTH FORMATION
COEF. HYDRO. DISP. = 0.024 m²/yr

Increase by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens7

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.024 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.901E-03 1.458E-04 1.098E-05 5.784E-07 2.124E-08 5.423E-10 9.841E-12 2.081E-13 2.915E-14 7.953E-15 2.043E-15 4.774E-16 1.011E-16 1.933E-17 3.328E-18 5.140E-19 7.094E-20 8.711E-21 9.475E-22 9.083E-23 7.635E-24 5.600E-25 3.569E-26 1.981E-27 9.881E-29 5.193E-30 4.271E-31 6.005E-32 1.000E-32 1.635E-33 2.519E-34 3.634E-35 4.894E-36 6.142E-37 7.170E-38 7.772E-39
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.871E-02 2.522E-02 6.193E-03 1.574E-03 3.365E-04 6.035E-05 9.063E-06 1.138E-06 1.192E-07 1.041E-08 7.581E-10

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.629E-11 2.521E-12 1.944E-13 4.635E-14 1.817E-14 7.256E-15 2.778E-15 1.014E-15 3.527E-16 1.166E-16 3.666E-17 1.094E-17 3.094E-18 8.284E-19 2.097E-19 5.012E-20 1.129E-20 2.394E-21 4.767E-22 8.904E-23 1.557E-23 2.543E-24 3.876E-25 5.505E-26 7.288E-27 9.049E-28
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.742E-01 5.025E-01 2.900E-01 1.474E-01 6.519E-02 2.398E-02 9.236E-03 3.176E-03 9.739E-04 2.658E-04 6.448E-05 1.389E-05 2.656E-06 4.501E-07 6.758E-08 8.987E-09 1.058E-09 1.107E-10 1.046E-11 1.001E-12 1.519E-13 5.108E-14 2.367E-14 1.129E-14 5.257E-15 2.374E-15 1.038E-15 4.395E-16 1.800E-16

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.123E-17 2.724E-17 1.006E-17 3.583E-18 1.231E-18 4.073E-19 1.298E-19 3.977E-20 1.171E-20 3.312E-21 8.986E-22
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.019E-01 5.590E-01 3.570E-01 2.073E-01 1.083E-01 4.916E-02 2.340E-02 1.025E-02 4.124E-03 1.522E-03 5.150E-04 1.595E-04 4.522E-05 1.172E-05 2.777E-06 6.012E-07 1.188E-07 2.144E-08 3.531E-09 5.310E-10 7.317E-11 9.400E-12 1.227E-12 2.190E-13 7.316E-14 3.561E-14 1.879E-14 9.861E-15 5.070E-15 2.546E-15 1.248E-15 5.972E-16 2.787E-16 1.268E-16 5.626E-17 2.431E-17 1.023E-17 4.193E-18 1.672E-18 6.481E-19
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.215E-01 6.001E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.087E-01 2.579E-01 1.494E-01 7.720E-02 4.185E-02 2.123E-02 1.008E-02 4.466E-03 1.847E-03 7.127E-04 2.563E-04 8.584E-05 2.677E-05 7.771E-06 2.099E-06 5.271E-07 1.231E-07 2.673E-08 5.394E-09 1.012E-09 1.768E-10 2.893E-11 4.562E-12 7.724E-13 1.842E-13 7.322E-14 3.860E-14 2.179E-14 1.229E-14 6.830E-15 3.726E-15 1.994E-15 1.047E-15 5.389E-16 2.719E-16 1.344E-16 6.513E-17 3.090E-17
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.363E-01 6.316E-01 4.499E-01 3.007E-01 1.868E-01 1.056E-01 6.249E-02 3.502E-02 1.857E-02 9.311E-03 4.409E-03 1.971E-03 8.312E-04 3.306E-04 1.239E-04 4.378E-05 1.457E-05

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.565E-06 1.347E-06 3.740E-07 9.774E-08 2.403E-08 5.560E-09 1.210E-09 2.482E-10 4.813E-11 8.956E-12 1.689E-12 3.778E-13 1.260E-13 6.151E-14 3.535E-14 2.104E-14 1.248E-14 7.304E-15 4.211E-15 2.389E-15 1.334E-15 7.327E-16 3.959E-16
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.480E-01 6.567E-01 4.837E-01 3.371E-01 2.206E-01 1.331E-01 8.395E-02 5.056E-02 2.906E-02 1.592E-02 8.307E-03 4.128E-03 1.952E-03 8.782E-04 3.757E-04 1.528E-04 5.905E-05 2.168E-05 7.561E-06 2.504E-06 7.875E-07 2.351E-07 6.662E-08 1.792E-08 4.573E-09 1.108E-09 2.551E-10 5.596E-11 1.183E-11 2.499E-12 5.864E-13 1.847E-13

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.445E-14 4.819E-14 2.955E-14 1.831E-14 1.126E-14 6.842E-15 4.103E-15 2.427E-15
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.575E-01 6.774E-01 5.120E-01 3.686E-01 2.510E-01 1.592E-01 1.054E-01 6.704E-02 4.094E-02 2.398E-02 1.347E-02 7.250E-03 3.738E-03 1.845E-03 8.719E-04 3.942E-04 1.705E-04 7.052E-05 2.789E-05 1.055E-05 3.812E-06 1.317E-06 4.346E-07 1.370E-07 4.128E-08 1.188E-08 3.266E-09 8.578E-10 2.155E-10 5.194E-11 1.213E-11 2.829E-12 7.166E-13 2.300E-13 1.032E-13 5.863E-14 3.664E-14 2.342E-14 1.493E-14 9.438E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.654E-01 6.947E-01 5.360E-01 3.960E-01 2.783E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.837E-01 1.263E-01 8.390E-02 5.373E-02 3.318E-02 1.974E-02 1.131E-02 6.237E-03 3.311E-03 1.690E-03 8.302E-04 3.920E-04 1.780E-04 7.764E-05 3.255E-05 1.311E-05 5.074E-06 1.886E-06 6.732E-07 2.308E-07 7.596E-08 2.400E-08 7.284E-09 2.122E-09 5.938E-10 1.598E-10 4.149E-11 1.050E-11 2.669E-12 7.338E-13 2.492E-13 1.141E-13 6.560E-14 4.172E-14 2.732E-14
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.721E-01 7.094E-01 5.568E-01 4.202E-01 3.030E-01 2.066E-01 1.466E-01 1.008E-01 6.706E-02 4.320E-02 2.692E-02 1.622E-02 9.443E-03 5.313E-03 2.887E-03 1.515E-03 7.678E-04 3.755E-04 1.772E-04 8.072E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.547E-05 1.503E-05 6.145E-06 2.423E-06 9.211E-07 3.376E-07 1.193E-07 4.066E-08 1.335E-08 4.229E-09 1.291E-09 3.802E-10 1.082E-10 2.986E-11 8.087E-12 2.219E-12 6.633E-13 2.430E-13 1.168E-13 6.884E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.779E-01 7.222E-01 5.750E-01 4.416E-01 3.255E-01 2.279E-01 1.659E-01 1.174E-01 8.064E-02 5.379E-02 3.482E-02 2.186E-02 1.331E-02 7.856E-03 4.494E-03 2.490E-03 1.337E-03 6.951E-04 3.499E-04 1.706E-04 8.048E-05 3.675E-05 1.624E-05 6.947E-06 2.875E-06 1.151E-06 4.458E-07 1.670E-07 6.054E-08 2.122E-08 7.195E-09 2.360E-09 7.488E-10 2.301E-10 6.857E-11

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.993E-11 5.733E-12 1.691E-12 5.512E-13 2.204E-13
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.829E-01 7.334E-01 5.911E-01 4.609E-01 3.459E-01 2.479E-01 1.844E-01 1.336E-01 9.427E-02 6.475E-02 4.327E-02 2.813E-02 1.778E-02 1.092E-02 6.519E-03 3.781E-03 2.130E-03 1.166E-03 6.193E-04 3.195E-04 1.600E-04 7.776E-05 3.668E-05 1.679E-05 7.458E-06 3.214E-06 1.344E-06 5.450E-07 2.144E-07 8.182E-08 3.028E-08 1.087E-08 3.786E-09 1.279E-09 4.192E-10 1.335E-10 4.141E-11 1.261E-11 3.835E-12 1.216E-12
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.874E-01 7.433E-01 6.055E-01 4.783E-01 3.647E-01 2.665E-01 2.019E-01 1.493E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.078E-01 7.592E-02 5.213E-02 3.490E-02 2.276E-02 1.447E-02 8.957E-03 5.400E-03 3.169E-03 1.811E-03 1.007E-03 5.451E-04 2.871E-04 1.471E-04 7.333E-05 3.556E-05 1.677E-05 7.691E-06 3.431E-06 1.488E-06 6.276E-07 2.574E-07 1.026E-07 3.978E-08 1.499E-08 5.491E-09 1.956E-09 6.775E-10 2.284E-10 7.504E-11 2.413E-11 7.671E-12
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.914E-01 7.522E-01 6.184E-01 4.940E-01 3.820E-01 2.839E-01 2.185E-01 1.646E-01 1.211E-01 8.716E-02 6.127E-02 4.207E-02 2.820E-02 1.846E-02 1.179E-02 7.346E-03 4.466E-03 2.649E-03 1.532E-03 8.642E-04 4.753E-04 2.548E-04 1.332E-04

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.785E-05 3.369E-05 1.630E-05 7.687E-06 3.532E-06 1.581E-06 6.897E-07 2.931E-07 1.213E-07 4.894E-08 1.923E-08 7.358E-09 2.743E-09 9.965E-10 3.528E-10 1.219E-10 4.120E-11
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.950E-01 7.602E-01 6.301E-01 5.085E-01 3.979E-01 3.002E-01 2.344E-01 1.792E-01 1.342E-01 9.839E-02 7.059E-02 4.955E-02 3.401E-02 2.283E-02 1.498E-02 9.612E-03 6.026E-03 3.691E-03 2.209E-03 1.291E-03 7.374E-04 4.112E-04 2.240E-04 1.191E-04 6.183E-05 3.134E-05 1.551E-05 7.491E-06 3.532E-06 1.625E-06 7.300E-07 3.200E-07 1.369E-07 5.713E-08 2.327E-08 9.251E-09 3.589E-09 1.359E-09

	1.149E+01 1.180E+01	5.022E-10 1.813E-10
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.982E-01 7.674E-01 6.408E-01 5.217E-01 4.127E-01 3.156E-01 2.494E-01 1.933E-01 1.470E-01 1.095E-01 8.001E-02 5.726E-02 4.013E-02 2.755E-02 1.852E-02 1.218E-02 7.845E-03 4.944E-03 3.048E-03 1.839E-03 1.085E-03 6.264E-04 3.537E-04 1.953E-04 1.054E-04 5.566E-05 2.873E-05 1.450E-05 7.152E-06 3.449E-06 1.626E-06 7.493E-07 3.375E-07 1.486E-07 6.392E-08 2.688E-08 1.105E-08 4.436E-09 1.742E-09 6.684E-10
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.012E-01 7.741E-01 6.506E-01 5.340E-01 4.265E-01 3.300E-01 2.636E-01 2.069E-01 1.594E-01 1.206E-01 8.946E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.513E-02 4.650E-02 3.256E-02 2.235E-02 1.504E-02 9.916E-03 6.408E-03 4.057E-03 2.516E-03 1.529E-03 9.098E-04 5.302E-04 3.026E-04 1.691E-04 9.256E-05 4.959E-05 2.601E-05 1.336E-05 6.714E-06 3.304E-06 1.591E-06 7.500E-07 3.460E-07 1.562E-07 6.904E-08 2.986E-08 1.264E-08 5.234E-09 2.122E-09
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.039E-01 7.801E-01 6.597E-01 5.453E-01 4.394E-01 3.436E-01 2.772E-01 2.199E-01 1.715E-01 1.314E-01 9.890E-02 7.311E-02 5.307E-02 3.782E-02 2.645E-02 1.816E-02 1.223E-02 8.081E-03 5.238E-03 3.330E-03 2.076E-03 1.270E-03 7.612E-04 4.475E-04 2.579E-04 1.457E-04

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.070E-05 4.381E-05 2.331E-05 1.216E-05 6.215E-06 3.113E-06 1.528E-06 7.350E-07 3.465E-07 1.600E-07 7.242E-08 3.211E-08 1.395E-08 5.939E-09
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.064E-01 7.857E-01 6.680E-01 5.558E-01 4.514E-01 3.564E-01 2.901E-01 2.324E-01 1.832E-01 1.420E-01 1.083E-01 8.116E-02 5.979E-02 4.329E-02 3.079E-02 2.152E-02 1.477E-02 9.957E-03 6.591E-03 4.284E-03 2.734E-03 1.713E-03 1.053E-03 6.359E-04 3.767E-04 2.190E-04 1.250E-04 6.997E-05 3.844E-05 2.072E-05 1.096E-05 5.685E-06 2.894E-06 1.445E-06 7.077E-07 3.401E-07 1.603E-07 7.410E-08 3.360E-08 1.495E-08

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.087E-01 7.909E-01 6.758E-01 5.657E-01 4.628E-01 3.686E-01 3.024E-01 2.445E-01 1.946E-01 1.525E-01 1.176E-01 8.923E-02 6.662E-02 4.892E-02 3.533E-02 2.509E-02 1.752E-02 1.203E-02 8.115E-03 5.381E-03 3.507E-03 2.246E-03 1.413E-03 8.735E-04 5.305E-04 3.165E-04 1.855E-04 1.068E-04 6.036E-05 3.352E-05 1.828E-05 9.789E-06 5.148E-06 2.658E-06 1.348E-06 6.713E-07 3.282E-07 1.575E-07 7.425E-08 3.436E-08
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.108E-01 7.958E-01 6.830E-01 5.749E-01 4.734E-01 3.801E-01 3.142E-01 2.560E-01 2.056E-01 1.627E-01 1.268E-01 9.729E-02 7.352E-02 5.470E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.005E-02 2.887E-02 2.047E-02 1.428E-02 9.805E-03 6.620E-03 4.397E-03 2.872E-03 1.845E-03 1.165E-03 7.239E-04 4.421E-04 2.654E-04 1.567E-04 9.092E-05 5.186E-05 2.908E-05 1.603E-05 8.681E-06 4.622E-06 2.418E-06 1.244E-06 6.285E-07 3.121E-07 1.523E-07 7.306E-08
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.128E-01 8.003E-01 6.898E-01 5.836E-01 4.835E-01 3.911E-01 3.254E-01 2.671E-01 2.163E-01 1.726E-01 1.358E-01 1.053E-01 8.047E-02 6.058E-02 4.492E-02 3.281E-02 2.360E-02 1.671E-02 1.165E-02 8.000E-03 5.406E-03 3.596E-03 2.354E-03 1.516E-03 9.613E-04 5.997E-04 3.681E-04 2.223E-04 1.321E-04

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.721E-05 4.440E-05 2.512E-05 1.398E-05 7.650E-06 4.119E-06 2.181E-06 1.136E-06 5.819E-07 2.932E-07 1.453E-07
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.147E-01 8.045E-01 6.962E-01 5.918E-01 4.930E-01 4.015E-01 3.361E-01 2.778E-01 2.266E-01 1.823E-01 1.447E-01 1.133E-01 8.745E-02 6.655E-02 4.992E-02 3.691E-02 2.689E-02 1.931E-02 1.366E-02 9.517E-03 6.533E-03 4.418E-03 2.942E-03 1.930E-03 1.247E-03 7.928E-04 4.966E-04 3.062E-04 1.859E-04 1.111E-04 6.541E-05 3.789E-05 2.161E-05 1.213E-05 6.704E-06 3.647E-06 1.952E-06 1.029E-06 5.336E-07 2.724E-07
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.164E-01 8.085E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.022E-01 5.995E-01 5.021E-01 4.114E-01 3.464E-01 2.881E-01 2.366E-01 1.918E-01 1.535E-01 1.212E-01 9.442E-02 7.257E-02 5.502E-02 4.114E-02 3.033E-02 2.205E-02 1.580E-02 1.117E-02 7.778E-03 5.340E-03 3.613E-03 2.409E-03 1.583E-03 1.025E-03 6.540E-04 4.111E-04 2.546E-04 1.553E-04 9.338E-05 5.529E-05 3.225E-05 1.853E-05 1.049E-05 5.847E-06 3.210E-06 1.736E-06 9.248E-07 4.851E-07
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.181E-01 8.122E-01 7.078E-01 6.068E-01 5.107E-01 4.209E-01 3.563E-01 2.980E-01 2.463E-01 2.010E-01 1.621E-01 1.290E-01 1.014E-01 7.864E-02 6.020E-02 4.548E-02 3.390E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.493E-02 1.809E-02 1.295E-02 9.138E-03 6.362E-03 4.367E-03 2.957E-03 1.974E-03 1.299E-03 8.432E-04 5.395E-04 3.403E-04 2.116E-04 1.297E-04 7.835E-05 4.666E-05 2.739E-05 1.585E-05 9.036E-06 5.078E-06 2.813E-06 1.535E-06 8.258E-07
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.196E-01 8.158E-01 7.132E-01 6.137E-01 5.188E-01 4.299E-01 3.657E-01 3.076E-01 2.557E-01 2.100E-01 1.705E-01 1.367E-01 1.083E-01 8.473E-02 6.545E-02 4.992E-02 3.759E-02 2.794E-02 2.050E-02 1.485E-02 1.061E-02 7.482E-03 5.206E-03 3.575E-03 2.421E-03 1.618E-03 1.067E-03 6.937E-04 4.450E-04 2.816E-04 1.757E-04 1.082E-04

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.566E-05 3.931E-05 2.321E-05 1.352E-05 7.760E-06 4.394E-06 2.453E-06 1.351E-06
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.211E-01 8.191E-01 7.183E-01 6.203E-01 5.266E-01 4.386E-01 3.748E-01 3.168E-01 2.648E-01 2.188E-01 1.788E-01 1.444E-01 1.152E-01 9.083E-02 7.075E-02 5.445E-02 4.139E-02 3.107E-02 2.304E-02 1.686E-02 1.219E-02 8.700E-03 6.130E-03 4.264E-03 2.928E-03 1.984E-03 1.327E-03 8.763E-04 5.710E-04 3.672E-04 2.330E-04 1.459E-04 9.016E-05 5.498E-05 3.308E-05 1.964E-05 1.150E-05 6.646E-06 3.789E-06 2.132E-06
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.225E-01 8.223E-01 7.231E-01 6.265E-01 5.341E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.469E-01 3.835E-01 3.257E-01 2.736E-01 2.274E-01 1.869E-01 1.519E-01 1.220E-01 9.692E-02 7.609E-02 5.904E-02 4.527E-02 3.430E-02 2.568E-02 1.899E-02 1.387E-02 1.001E-02 7.138E-03 5.025E-03 3.494E-03 2.399E-03 1.627E-03 1.089E-03 7.201E-04 4.701E-04 3.030E-04 1.928E-04 1.211E-04 7.511E-05 4.599E-05 2.779E-05 1.658E-05 9.767E-06 5.678E-06 3.258E-06
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.244E-01 8.265E-01 7.294E-01 6.348E-01 5.439E-01 4.579E-01 3.952E-01 3.376E-01 2.855E-01 2.390E-01 1.979E-01 1.622E-01 1.315E-01 1.054E-01 8.361E-02 6.557E-02 5.085E-02 3.898E-02 2.955E-02 2.214E-02

	6.056E+00	1.640E-02
	6.358E+00	1.201E-02
	6.660E+00	8.687E-03
	6.963E+00	6.212E-03
	7.265E+00	4.390E-03
	7.567E+00	3.065E-03
	7.869E+00	2.115E-03
	8.171E+00	1.442E-03
	8.473E+00	9.713E-04
	8.775E+00	6.464E-04
	9.077E+00	4.250E-04
	9.379E+00	2.761E-04
	9.681E+00	1.772E-04
	9.983E+00	1.123E-04
	1.029E+01	7.032E-05
	1.059E+01	4.350E-05
	1.089E+01	2.658E-05
	1.119E+01	1.604E-05
	1.149E+01	9.561E-06
	1.180E+01	5.629E-06

NOTICE

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SENSITIVITY RUN #8
WADSWORTH FORMATION
COEF. HYDRO. DISP. = 0.014 m²/yr

Decrease by 25%

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens8

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.014 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.902E-03 1.667E-04 5.262E-06 8.989E-08 8.249E-10 4.272E-12 6.677E-14 1.118E-14 1.890E-15 2.712E-16 3.278E-17 3.313E-18 2.778E-19 1.916E-20 1.075E-21 4.858E-23 1.748E-24 4.953E-26 1.109E-27 2.183E-29 6.805E-31 5.214E-32 5.006E-33 4.466E-34 3.563E-35 2.526E-36 1.585E-37 8.761E-39 4.250E-40 1.801E-41 6.662E-43 2.168E-44 6.514E-46 2.140E-47 1.013E-48 6.811E-50
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.874E-02 2.540E-02 7.078E-03 1.141E-03 1.365E-04 1.206E-05 7.836E-07 3.734E-08 1.302E-09 3.357E-11 7.875E-13

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.888E-14 1.969E-14 5.864E-15 1.617E-15 4.103E-16 9.556E-17 2.038E-17 3.969E-18 7.040E-19 1.133E-19 1.650E-20 2.167E-21 2.554E-22 2.693E-23 2.529E-24 2.108E-25 1.557E-26 1.026E-27 6.346E-29 4.446E-30 4.918E-31 8.346E-32 1.602E-32 3.021E-33 5.422E-34 9.197E-35
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.743E-01 5.026E-01 2.900E-01 1.477E-01 6.632E-02 2.741E-02 7.704E-03 1.782E-03 3.380E-04 5.241E-05 6.627E-06 6.820E-07 5.705E-08 3.875E-09 2.140E-10 9.875E-12 5.048E-13 7.834E-14 2.773E-14 1.050E-14 3.800E-15 1.302E-15 4.219E-16 1.291E-16 3.725E-17 1.012E-17 2.587E-18 6.205E-19 1.395E-19

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.933E-20 5.759E-21 1.053E-21 1.791E-22 2.826E-23 4.125E-24 5.563E-25 6.920E-26 7.946E-27 8.496E-28 8.751E-29
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.019E-01 5.591E-01 3.574E-01 2.084E-01 1.113E-01 5.618E-02 2.097E-02 6.780E-03 1.892E-03 4.549E-04 9.401E-05 1.668E-05 2.536E-06 3.301E-07 3.678E-08 3.504E-09 2.858E-10 2.025E-11 1.402E-12 1.700E-13 5.424E-14 2.331E-14 1.003E-14 4.156E-15 1.654E-15 6.314E-16 2.309E-16 8.085E-17 2.708E-17 8.665E-18 2.647E-18 7.713E-19 2.141E-19 5.652E-20 1.418E-20 3.376E-21 7.618E-22 1.627E-22 3.283E-23 6.252E-24
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.216E-01 6.005E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.097E-01 2.603E-01 1.547E-01 8.823E-02 3.917E-02 1.552E-02 5.475E-03 1.716E-03 4.772E-04 1.175E-04 2.562E-05 4.937E-06 8.405E-07 1.263E-07 1.675E-08 1.960E-09 2.027E-10 1.879E-11 1.717E-12 2.349E-13 7.364E-14 3.365E-14 1.600E-14 7.429E-15 3.342E-15 1.455E-15 6.124E-16 2.491E-16 9.783E-17 3.709E-17 1.356E-17 4.778E-18 1.621E-18 5.295E-19 1.663E-19 5.015E-20 1.452E-20 4.031E-21
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.366E-01 6.324E-01 4.518E-01 3.048E-01 1.950E-01 1.207E-01 6.024E-02 2.738E-02 1.131E-02 4.237E-03 1.438E-03 4.413E-04 1.224E-04 3.066E-05 6.932E-06 1.413E-06 2.597E-07

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.300E-08 6.413E-09 8.619E-10 1.047E-10 1.173E-11 1.347E-12 2.313E-13 8.038E-14 3.898E-14 1.983E-14 9.931E-15 4.847E-15 2.302E-15 1.064E-15 4.777E-16 2.085E-16 8.835E-17 3.635E-17 1.451E-17 5.617E-18 2.107E-18 7.657E-19 2.693E-19
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.485E-01 6.582E-01 4.868E-01 3.432E-01 2.316E-01 1.521E-01 8.268E-02 4.150E-02 1.921E-02 8.179E-03 3.202E-03 1.151E-03 3.796E-04 1.148E-04 3.178E-05 8.061E-06 1.871E-06 3.974E-07 7.718E-08 1.370E-08 2.225E-09 3.307E-10 4.527E-11 5.891E-12 8.399E-13 1.892E-13 7.674E-14 3.968E-14 2.126E-14 1.124E-14 5.815E-15 2.939E-15

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.451E-15 6.992E-16 3.288E-16 1.508E-16 6.745E-17 2.941E-17 1.249E-17 5.167E-18
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.583E-01 6.796E-01 5.164E-01 3.767E-01 2.649E-01 1.819E-01 1.055E-01 5.710E-02 2.879E-02 1.351E-02 5.890E-03 2.385E-03 8.959E-04 3.120E-04 1.007E-04 3.010E-05 8.328E-06 2.132E-06 5.050E-07 1.106E-07 2.240E-08 4.195E-09 7.267E-10 1.167E-10 1.761E-11 2.638E-12 4.783E-13 1.441E-13 6.797E-14 3.727E-14 2.080E-14 1.146E-14 6.194E-15 3.280E-15 1.702E-15 8.643E-16 4.298E-16 2.091E-16 9.954E-17 4.634E-17
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.666E-01 6.977E-01 5.419E-01 4.062E-01 2.951E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.099E-01 1.281E-01 7.355E-02 3.967E-02 2.008E-02 9.527E-03 4.233E-03 1.760E-03 6.847E-04 2.489E-04 8.456E-05 2.683E-05 7.947E-06 2.197E-06 5.668E-07 1.364E-07 3.061E-08 6.408E-09 1.251E-09 2.282E-10 3.914E-11 6.476E-12 1.142E-12 2.755E-13 1.089E-13 5.782E-14 3.322E-14 1.916E-14 1.090E-14 6.095E-15 3.347E-15 1.804E-15 9.547E-16 4.957E-16 2.525E-16
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.737E-01 7.134E-01 5.642E-01 4.325E-01 3.225E-01 2.360E-01 1.501E-01 9.041E-02 5.149E-02 2.770E-02 1.407E-02 6.735E-03 3.039E-03 1.291E-03 5.166E-04 1.945E-04 6.886E-05 2.292E-05 7.174E-06 2.110E-06

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.829E-07 1.513E-07 3.688E-08 8.443E-09 1.815E-09 3.669E-10 6.998E-11 1.278E-11 2.358E-12 5.172E-13 1.710E-13 8.355E-14 4.805E-14 2.857E-14 1.691E-14 9.872E-15 5.672E-15 3.207E-15 1.783E-15 9.745E-16
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.799E-01 7.272E-01 5.840E-01 4.561E-01 3.476E-01 2.604E-01 1.714E-01 1.074E-01 6.395E-02 3.617E-02 1.942E-02 9.888E-03 4.771E-03 2.180E-03 9.435E-04 3.864E-04 1.497E-04 5.484E-05 1.899E-05 6.219E-06 1.924E-06 5.626E-07 1.554E-07 4.053E-08 9.986E-09 2.324E-09 5.112E-10 1.065E-10 2.123E-11 4.183E-12 9.040E-13 2.640E-13 1.159E-13 6.500E-14 3.928E-14

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.395E-14 1.447E-14 8.629E-15 5.070E-15 2.935E-15
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.854E-01 7.393E-01 6.016E-01 4.774E-01 3.706E-01 2.832E-01 1.918E-01 1.242E-01 7.680E-02 4.532E-02 2.549E-02 1.366E-02 6.972E-03 3.386E-03 1.564E-03 6.873E-04 2.870E-04 1.139E-04 4.295E-05 1.538E-05 5.230E-06 1.689E-06 5.176E-07 1.506E-07 4.157E-08 1.089E-08 2.708E-09 6.393E-10 1.436E-10 3.087E-11 6.501E-12 1.438E-12 3.938E-13 1.566E-13 8.398E-14 5.089E-14 3.170E-14 1.970E-14 1.211E-14 7.344E-15
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.903E-01 7.502E-01 6.174E-01 4.967E-01 3.917E-01 3.044E-01 2.113E-01 1.408E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.987E-02 5.496E-02 3.217E-02 1.801E-02 9.638E-03 4.929E-03 2.407E-03 1.123E-03 4.996E-04 2.122E-04 8.596E-05 3.321E-05 1.224E-05 4.297E-06 1.439E-06 4.590E-07 1.395E-07 4.043E-08 1.116E-08 2.935E-09 7.358E-10 1.761E-10 4.044E-11 9.059E-12 2.083E-12 5.579E-13 2.058E-13 1.049E-13 6.308E-14 3.986E-14 2.532E-14 1.596E-14
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.946E-01 7.600E-01 6.317E-01 5.143E-01 4.111E-01 3.243E-01 2.299E-01 1.569E-01 1.030E-01 6.497E-02 3.935E-02 2.287E-02 1.275E-02 6.817E-03 3.492E-03 1.714E-03 8.058E-04 3.627E-04 1.563E-04 6.445E-05 2.543E-05 9.600E-06 3.466E-06

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.197E-06 3.954E-07 1.249E-07 3.770E-08 1.088E-08 3.004E-09 7.932E-10 2.005E-10 4.877E-11 1.155E-11 2.773E-12 7.455E-13 2.624E-13 1.275E-13 7.556E-14 4.814E-14 3.112E-14
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.986E-01 7.689E-01 6.448E-01 5.305E-01 4.292E-01 3.428E-01 2.477E-01 1.727E-01 1.161E-01 7.523E-02 4.694E-02 2.819E-02 1.629E-02 9.048E-03 4.832E-03 2.479E-03 1.222E-03 5.786E-04 2.630E-04 1.148E-04 4.807E-05 1.932E-05 7.450E-06 2.756E-06 9.779E-07 3.328E-07 1.086E-07 3.401E-08 1.021E-08 2.938E-09 8.113E-10 2.152E-10 5.501E-11 1.371E-11 3.435E-12 9.400E-13 3.229E-13 1.510E-13

	1.149E+01 1.180E+01	8.803E-14 5.630E-14
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.022E-01 7.769E-01 6.568E-01 5.454E-01 4.459E-01 3.602E-01 2.646E-01 1.880E-01 1.291E-01 8.564E-02 5.485E-02 3.390E-02 2.021E-02 1.161E-02 6.430E-03 3.431E-03 1.763E-03 8.725E-04 4.157E-04 1.906E-04 8.410E-05 3.571E-05 1.458E-05 5.730E-06 2.165E-06 7.868E-07 2.750E-07 9.239E-08 2.985E-08 9.270E-09 2.768E-09 7.952E-10 2.200E-10 5.878E-11 1.532E-11 4.002E-12 1.123E-12 3.831E-13 1.745E-13 1.002E-13
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.055E-01 7.844E-01 6.678E-01 5.592E-01 4.615E-01 3.766E-01 2.806E-01 2.027E-01 1.419E-01 9.613E-02 6.301E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.994E-02 2.448E-02 1.449E-02 8.288E-03 4.577E-03 2.441E-03 1.256E-03 6.236E-04 2.987E-04 1.380E-04 6.151E-05 2.643E-05 1.095E-05 4.375E-06 1.685E-06 6.253E-07 2.237E-07 7.710E-08 2.561E-08 8.200E-09 2.530E-09 7.526E-10 2.161E-10 6.005E-11 1.630E-11 4.428E-12 1.278E-12 4.384E-13 1.967E-13
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.086E-01 7.912E-01 6.779E-01 5.720E-01 4.760E-01 3.920E-01 2.960E-01 2.170E-01 1.545E-01 1.066E-01 7.136E-02 4.627E-02 2.906E-02 1.767E-02 1.040E-02 5.923E-03 3.263E-03 1.739E-03 8.957E-04 4.461E-04 2.148E-04 9.993E-05 4.493E-05 1.952E-05 8.191E-06 3.321E-06

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.300E-06 4.918E-07 1.796E-07 6.335E-08 2.158E-08 7.096E-09 2.254E-09 6.916E-10 2.053E-10 5.909E-11 1.664E-11 4.689E-12 1.395E-12 4.850E-13
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.114E-01 7.975E-01 6.873E-01 5.839E-01 4.896E-01 4.065E-01 3.106E-01 2.308E-01 1.668E-01 1.171E-01 7.983E-02 5.283E-02 3.392E-02 2.113E-02 1.276E-02 7.468E-03 4.237E-03 2.329E-03 1.240E-03 6.396E-04 3.195E-04 1.545E-04 7.233E-05 3.278E-05 1.438E-05 6.105E-06 2.508E-06 9.970E-07 3.835E-07 1.427E-07 5.137E-08 1.789E-08 6.028E-09 1.965E-09 6.201E-10 1.896E-10 5.635E-11 1.641E-11 4.784E-12 1.468E-12

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.140E-01 8.034E-01 6.961E-01 5.950E-01 5.024E-01 4.201E-01 3.245E-01 2.442E-01 1.788E-01 1.275E-01 8.838E-02 5.957E-02 3.902E-02 2.483E-02 1.535E-02 9.211E-03 5.366E-03 3.034E-03 1.664E-03 8.858E-04 4.573E-04 2.290E-04 1.112E-04 5.235E-05 2.390E-05 1.057E-05 4.536E-06 1.886E-06 7.600E-07 2.968E-07 1.123E-07 4.119E-08 1.464E-08 5.041E-09 1.683E-09 5.445E-10 1.710E-10 5.232E-11 1.571E-11 4.729E-12
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.164E-01 8.088E-01 7.043E-01 6.054E-01 5.144E-01 4.331E-01 3.378E-01 2.570E-01 1.906E-01 1.378E-01 9.698E-02 6.647E-02 4.433E-02 2.877E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.816E-02 1.115E-02 6.651E-03 3.857E-03 2.174E-03 1.190E-03 6.333E-04 3.273E-04 1.642E-04 8.005E-05 3.788E-05 1.741E-05 7.764E-06 3.362E-06 1.413E-06 5.766E-07 2.283E-07 8.773E-08 3.272E-08 1.184E-08 4.159E-09 1.418E-09 4.696E-10 1.512E-10 4.748E-11 1.467E-11
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.186E-01 8.139E-01 7.119E-01 6.151E-01 5.257E-01 4.453E-01 3.505E-01 2.694E-01 2.021E-01 1.479E-01 1.056E-01 7.347E-02 4.982E-02 3.291E-02 2.118E-02 1.327E-02 8.091E-03 4.803E-03 2.774E-03 1.559E-03 8.524E-04 4.533E-04 2.344E-04 1.179E-04 5.765E-05 2.741E-05 1.267E-05 5.694E-06 2.487E-06

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.056E-06 4.356E-07 1.747E-07 6.806E-08 2.577E-08 9.485E-09 3.392E-09 1.179E-09 3.987E-10 1.313E-10 4.225E-11
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.207E-01 8.187E-01 7.191E-01 6.243E-01 5.364E-01 4.570E-01 3.626E-01 2.813E-01 2.133E-01 1.579E-01 1.142E-01 8.057E-02 5.546E-02 3.724E-02 2.439E-02 1.557E-02 9.685E-03 5.872E-03 3.469E-03 1.996E-03 1.119E-03 6.108E-04 3.247E-04 1.681E-04 8.469E-05 4.154E-05 1.984E-05 9.220E-06 4.171E-06 1.836E-06 7.865E-07 3.279E-07 1.330E-07 5.250E-08 2.016E-08 7.533E-09 2.739E-09 9.693E-10 3.341E-10 1.123E-10
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.227E-01 8.231E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.258E-01 6.330E-01 5.465E-01 4.680E-01 3.742E-01 2.928E-01 2.242E-01 1.678E-01 1.227E-01 8.771E-02 6.123E-02 4.174E-02 2.777E-02 1.804E-02 1.143E-02 7.066E-03 4.261E-03 2.506E-03 1.437E-03 8.036E-04 4.381E-04 2.328E-04 1.206E-04 6.087E-05 2.995E-05 1.436E-05 6.706E-06 3.052E-06 1.353E-06 5.847E-07 2.461E-07 1.009E-07 4.028E-08 1.567E-08 5.938E-09 2.192E-09 7.886E-10 2.766E-10
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.246E-01 8.273E-01 7.321E-01 6.411E-01 5.561E-01 4.785E-01 3.853E-01 3.040E-01 2.348E-01 1.774E-01 1.312E-01 9.490E-02 6.710E-02 4.637E-02 3.132E-02 2.066E-02 1.332E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.383E-03 5.152E-03 3.091E-03 1.811E-03 1.035E-03 5.775E-04 3.144E-04 1.670E-04 8.658E-05 4.378E-05 2.159E-05 1.039E-05 4.876E-06 2.232E-06 9.963E-07 4.337E-07 1.841E-07 7.623E-08 3.077E-08 1.211E-08 4.650E-09 1.741E-09 6.358E-10
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.263E-01 8.313E-01 7.381E-01 6.488E-01 5.652E-01 4.885E-01 3.960E-01 3.147E-01 2.451E-01 1.869E-01 1.396E-01 1.021E-01 7.305E-02 5.113E-02 3.501E-02 2.344E-02 1.535E-02 9.821E-03 6.143E-03 3.755E-03 2.242E-03 1.308E-03 7.459E-04 4.153E-04 2.258E-04 1.199E-04 6.221E-05 3.150E-05 1.558E-05 7.521E-06 3.545E-06 1.631E-06

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.326E-07 3.212E-07 1.375E-07 5.743E-08 2.342E-08 9.320E-09 3.620E-09 1.373E-09
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.280E-01 8.350E-01 7.438E-01 6.562E-01 5.738E-01 4.981E-01 4.062E-01 3.250E-01 2.551E-01 1.962E-01 1.480E-01 1.093E-01 7.906E-02 5.600E-02 3.884E-02 2.636E-02 1.751E-02 1.138E-02 7.234E-03 4.498E-03 2.735E-03 1.627E-03 9.458E-04 5.377E-04 2.988E-04 1.623E-04 8.618E-05 4.472E-05 2.268E-05 1.124E-05 5.444E-06 2.576E-06 1.191E-06 5.381E-07 2.375E-07 1.024E-07 4.315E-08 1.776E-08 7.139E-09 2.805E-09
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.295E-01 8.386E-01 7.492E-01 6.631E-01 5.820E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.072E-01 4.160E-01 3.350E-01 2.648E-01 2.054E-01 1.562E-01 1.165E-01 8.512E-02 6.097E-02 4.278E-02 2.941E-02 1.980E-02 1.305E-02 8.424E-03 5.322E-03 3.291E-03 1.992E-03 1.180E-03 6.838E-04 3.877E-04 2.151E-04 1.167E-04 6.196E-05 3.217E-05 1.634E-05 8.114E-06 3.941E-06 1.872E-06 8.696E-07 3.949E-07 1.754E-07 7.616E-08 3.234E-08 1.342E-08 5.449E-09
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.316E-01 8.432E-01 7.562E-01 6.723E-01 5.929E-01 5.193E-01 4.291E-01 3.485E-01 2.780E-01 2.178E-01 1.675E-01 1.264E-01 9.365E-02 6.804E-02 4.848E-02 3.387E-02 2.320E-02 1.558E-02 1.025E-02 6.613E-03

	6.056E+00	4.179E-03
	6.358E+00	2.587E-03
	6.660E+00	1.569E-03
	6.963E+00	9.323E-04
	7.265E+00	5.425E-04
	7.567E+00	3.092E-04
	7.869E+00	1.726E-04
	8.171E+00	9.432E-05
	8.473E+00	5.048E-05
	8.775E+00	2.645E-05
	9.077E+00	1.357E-05
	9.379E+00	6.816E-06
	9.681E+00	3.352E-06
	9.983E+00	1.613E-06
	1.029E+01	7.603E-07
	1.059E+01	3.507E-07
	1.089E+01	1.583E-07
	1.119E+01	6.997E-08
	1.149E+01	3.027E-08
	1.180E+01	1.281E-08

NOTICE

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SENSITIVITY RUN #9
WADSWORTH FORMATION
ESTIMATED EFFECTIVE POROSITY = 0.32

Maximum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens9

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	$3E-5$ m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.32	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.900E-03 1.359E-04 7.233E-06 2.452E-07 5.263E-09 7.160E-11 7.340E-13 3.876E-14 8.748E-15 1.911E-15 3.703E-16 6.333E-17 9.515E-18 1.250E-18 1.428E-19 1.411E-20 1.198E-21 8.678E-23 5.326E-24 2.749E-25 1.188E-26 4.346E-28 1.486E-29 7.229E-31 7.193E-32 9.519E-33 1.239E-33 1.496E-34 1.659E-35 1.686E-36 1.566E-37 1.325E-38 1.019E-39 7.105E-41 4.480E-42 2.556E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.869E-02 2.513E-02 5.769E-03 1.221E-03 2.077E-04 2.828E-05 3.074E-06 2.662E-07 1.833E-08 1.003E-09 4.385E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.672E-12 1.149E-13 2.993E-14 1.074E-14 3.730E-15 1.222E-15 3.766E-16 1.090E-16 2.957E-17 7.511E-18 1.782E-18 3.945E-19 8.129E-20 1.555E-20 2.758E-21 4.521E-22 6.834E-23 9.502E-24 1.212E-24 1.415E-25 1.511E-26 1.482E-27 1.364E-28 1.274E-29 1.466E-30 2.485E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.742E-01 5.025E-01 2.899E-01 1.472E-01 6.465E-02 2.234E-02 7.576E-03 2.227E-03 5.658E-04 1.240E-04 2.341E-05 3.802E-06 5.304E-07 6.351E-08 6.523E-09 5.747E-10 4.370E-11 3.014E-12 2.638E-13 5.932E-14 2.409E-14 1.048E-14 4.427E-15 1.799E-15 7.018E-16 2.627E-16 9.424E-17 3.238E-17 1.065E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.346E-18 1.004E-18 2.875E-19 7.844E-20 2.037E-20 5.027E-21 1.178E-21 2.617E-22 5.504E-23 1.095E-23 2.055E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.019E-01 5.590E-01 3.568E-01 2.068E-01 1.069E-01 4.579E-02 1.975E-02 7.665E-03 2.671E-03 8.343E-04 2.333E-04 5.834E-05 1.303E-05 2.599E-06 4.624E-07 7.334E-08 1.037E-08 1.306E-09 1.469E-10 1.494E-11 1.487E-12 2.057E-13 6.136E-14 2.804E-14 1.368E-14 6.563E-15 3.060E-15 1.385E-15 6.075E-16 2.584E-16 1.064E-16 4.244E-17 1.637E-17 6.109E-18 2.203E-18 7.669E-19 2.577E-19 8.349E-20 2.606E-20 7.834E-21
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.214E-01 5.999E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.082E-01 2.568E-01 1.468E-01 7.191E-02 3.593E-02 1.651E-02 6.970E-03 2.698E-03 9.567E-04 3.105E-04 9.215E-05 2.499E-05 6.190E-06 1.400E-06 2.887E-07 5.433E-08 9.321E-09 1.458E-09 2.083E-10 2.737E-11 3.433E-12 4.863E-13 1.151E-13 4.833E-14 2.489E-14 1.311E-14 6.792E-15 3.440E-15 1.701E-15 8.206E-16 3.861E-16 1.772E-16 7.922E-17 3.451E-17 1.464E-17 6.046E-18 2.429E-18 9.491E-19
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.362E-01 6.312E-01 4.490E-01 2.987E-01 1.829E-01 9.835E-02 5.428E-02 2.797E-02 1.343E-02 6.006E-03 2.498E-03 9.656E-04 3.466E-04 1.155E-04 3.570E-05 1.023E-05 2.718E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.690E-07 1.525E-07 3.220E-08 6.294E-09 1.139E-09 1.912E-10 2.994E-11 4.499E-12 7.258E-13 1.682E-13 6.648E-14 3.479E-14 1.937E-14 1.075E-14 5.869E-15 3.141E-15 1.647E-15 8.465E-16 4.261E-16 2.100E-16 1.013E-16 4.781E-17 2.208E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.477E-01 6.561E-01 4.822E-01 3.343E-01 2.153E-01 1.240E-01 7.355E-02 4.115E-02 2.169E-02 1.076E-02 5.020E-03 2.200E-03 9.055E-04 3.497E-04 1.267E-04 4.304E-05 1.370E-05 4.088E-06 1.142E-06 2.989E-07 7.325E-08 1.680E-08 3.608E-09 7.254E-10 1.368E-10 2.436E-11 4.208E-12 7.779E-13 1.949E-13 7.803E-14 4.163E-14 2.409E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.403E-14 8.075E-15 4.573E-15 2.545E-15 1.392E-15 7.484E-16 3.951E-16 2.049E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.571E-01 6.763E-01 5.098E-01 3.647E-01 2.443E-01 1.483E-01 9.293E-02 5.536E-02 3.132E-02 1.680E-02 8.547E-03 4.118E-03 1.879E-03 8.108E-04 3.310E-04 1.278E-04 4.662E-05 1.607E-05 5.233E-06 1.609E-06 4.674E-07 1.281E-07 3.316E-08 8.098E-09 1.867E-09 4.064E-10 8.376E-11 1.648E-11 3.194E-12 6.733E-13 1.903E-13 8.133E-14 4.489E-14 2.685E-14 1.622E-14 9.713E-15 5.737E-15 3.339E-15 1.914E-15 1.081E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.648E-01 6.932E-01 5.332E-01 3.911E-01 2.703E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.711E-01 1.120E-01 7.008E-02 4.189E-02 2.390E-02 1.301E-02 6.751E-03 3.337E-03 1.571E-03 7.041E-04 3.003E-04 1.218E-04 4.701E-05 1.725E-05 6.015E-06 1.994E-06 6.281E-07 1.880E-07 5.344E-08 1.443E-08 3.703E-09 9.025E-10 2.092E-10 4.629E-11 9.891E-12 2.124E-12 5.116E-13 1.667E-13 7.808E-14 4.505E-14 2.778E-14 1.729E-14 1.068E-14 6.518E-15 3.927E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.713E-01 7.075E-01 5.533E-01 4.142E-01 2.936E-01 1.924E-01 1.304E-01 8.493E-02 5.309E-02 3.183E-02 1.830E-02 1.008E-02 5.313E-03 2.682E-03 1.295E-03 5.984E-04 2.644E-04 1.117E-04 4.508E-05 1.739E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.409E-06 2.256E-06 7.588E-07 2.437E-07 7.472E-08 2.188E-08 6.116E-09 1.633E-09 4.163E-10 1.016E-10 2.386E-11 5.488E-12 1.304E-12 3.627E-13 1.379E-13 7.119E-14 4.302E-14 2.728E-14 1.740E-14 1.102E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.769E-01 7.198E-01 5.707E-01 4.347E-01 3.148E-01 2.123E-01 1.482E-01 9.969E-02 6.465E-02 4.038E-02 2.427E-02 1.404E-02 7.805E-03 4.172E-03 2.143E-03 1.057E-03 5.008E-04 2.278E-04 9.945E-05 4.167E-05 1.675E-05 6.461E-06 2.390E-06 8.482E-07 2.886E-07 9.418E-08 2.946E-08 8.839E-09 2.542E-09 7.012E-10 1.857E-10 4.736E-11 1.174E-11 2.904E-12 7.711E-13

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.514E-13 1.115E-13 6.300E-14 3.969E-14 2.580E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.818E-01 7.305E-01 5.861E-01 4.530E-01 3.341E-01 2.309E-01 1.651E-01 1.142E-01 7.638E-02 4.936E-02 3.081E-02 1.856E-02 1.079E-02 6.050E-03 3.271E-03 1.705E-03 8.561E-04 4.143E-04 1.931E-04 8.668E-05 3.747E-05 1.560E-05 6.248E-06 2.410E-06 8.943E-07 3.194E-07 1.098E-07 3.631E-08 1.155E-08 3.536E-09 1.042E-09 2.956E-10 8.088E-11 2.147E-11 5.612E-12 1.507E-12 4.561E-13 1.765E-13 9.015E-14 5.483E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.860E-01 7.400E-01 5.998E-01 4.694E-01 3.517E-01 2.483E-01 1.813E-01 1.284E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.814E-02 5.864E-02 3.779E-02 2.357E-02 1.423E-02 8.310E-03 4.693E-03 2.562E-03 1.352E-03 6.895E-04 3.397E-04 1.617E-04 7.432E-05 3.299E-05 1.414E-05 5.852E-06 2.338E-06 9.015E-07 3.355E-07 1.205E-07 4.177E-08 1.397E-08 4.510E-09 1.405E-09 4.226E-10 1.229E-10 3.466E-11 9.576E-12 2.659E-12 7.893E-13 2.792E-13 1.282E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.898E-01 7.484E-01 6.120E-01 4.843E-01 3.680E-01 2.646E-01 1.966E-01 1.421E-01 9.982E-02 6.810E-02 4.511E-02 2.899E-02 1.808E-02 1.093E-02 6.410E-03 3.642E-03 2.006E-03 1.070E-03 5.529E-04 2.767E-04 1.341E-04 6.290E-05 2.857E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.256E-05 5.345E-06 2.201E-06 8.771E-07 3.382E-07 1.262E-07 4.554E-08 1.590E-08 5.372E-09 1.756E-09 5.554E-10 1.702E-10 5.064E-11 1.473E-11 4.259E-12 1.276E-12 4.310E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.932E-01 7.560E-01 6.231E-01 4.979E-01 3.829E-01 2.798E-01 2.113E-01 1.554E-01 1.113E-01 7.764E-02 5.267E-02 3.475E-02 2.229E-02 1.390E-02 8.416E-03 4.951E-03 2.829E-03 1.569E-03 8.452E-04 4.418E-04 2.241E-04 1.103E-04 5.269E-05 2.442E-05 1.097E-05 4.784E-06 2.023E-06 8.294E-07 3.298E-07 1.272E-07 4.754E-08 1.723E-08 6.056E-09 2.064E-09 6.821E-10 2.188E-10 6.825E-11 2.079E-11

	1.149E+01 1.180E+01	6.264E-12 1.921E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.963E-01 7.629E-01 6.332E-01 5.104E-01 3.968E-01 2.941E-01 2.252E-01 1.683E-01 1.227E-01 8.720E-02 6.042E-02 4.078E-02 2.681E-02 1.717E-02 1.070E-02 6.489E-03 3.829E-03 2.199E-03 1.228E-03 6.668E-04 3.521E-04 1.808E-04 9.023E-05 4.378E-05 2.064E-05 9.460E-06 4.213E-06 1.823E-06 7.665E-07 3.131E-07 1.243E-07 4.791E-08 1.795E-08 6.530E-09 2.308E-09 7.928E-10 2.648E-10 8.608E-11 2.735E-11 8.566E-12
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 8.991E-01 7.691E-01 6.424E-01 5.218E-01 4.097E-01 3.076E-01 2.384E-01 1.807E-01 1.338E-01 9.672E-02 6.827E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.703E-02 3.161E-02 2.072E-02 1.324E-02 8.251E-03 5.011E-03 2.965E-03 1.710E-03 9.604E-04 5.255E-04 2.800E-04 1.453E-04 7.342E-05 3.612E-05 1.730E-05 8.065E-06 3.660E-06 1.617E-06 6.950E-07 2.908E-07 1.184E-07 4.691E-08 1.809E-08 6.786E-09 2.478E-09 8.805E-10 3.047E-10 1.028E-10 3.391E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.016E-01 7.748E-01 6.509E-01 5.325E-01 4.218E-01 3.203E-01 2.511E-01 1.926E-01 1.446E-01 1.062E-01 7.619E-02 5.344E-02 3.663E-02 2.452E-02 1.603E-02 1.023E-02 6.372E-03 3.874E-03 2.299E-03 1.331E-03 7.513E-04 4.138E-04 2.223E-04 1.165E-04 5.949E-05 2.963E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.439E-05 6.813E-06 3.144E-06 1.415E-06 6.203E-07 2.651E-07 1.104E-07 4.483E-08 1.774E-08 6.839E-09 2.570E-09 9.415E-10 3.363E-10 1.173E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.040E-01 7.801E-01 6.587E-01 5.424E-01 4.331E-01 3.324E-01 2.631E-01 2.041E-01 1.552E-01 1.155E-01 8.413E-02 5.998E-02 4.183E-02 2.854E-02 1.903E-02 1.241E-02 7.911E-03 4.928E-03 2.999E-03 1.783E-03 1.036E-03 5.878E-04 3.257E-04 1.762E-04 9.312E-05 4.804E-05 2.420E-05 1.190E-05 5.711E-06 2.676E-06 1.224E-06 5.463E-07 2.380E-07 1.012E-07 4.198E-08 1.700E-08 6.717E-09 2.590E-09 9.750E-10 3.583E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.061E-01 7.850E-01 6.660E-01 5.516E-01 4.437E-01 3.438E-01 2.746E-01 2.152E-01 1.654E-01 1.247E-01 9.205E-02 6.660E-02 4.719E-02 3.274E-02 2.224E-02 1.479E-02 9.622E-03 6.126E-03 3.815E-03 2.324E-03 1.385E-03 8.071E-04 4.599E-04 2.562E-04 1.396E-04 7.432E-05 3.868E-05 1.968E-05 9.788E-06 4.757E-06 2.259E-06 1.049E-06 4.757E-07 2.108E-07 9.130E-08 3.864E-08 1.597E-08 6.453E-09 2.547E-09 9.826E-10
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.081E-01 7.895E-01 6.728E-01 5.603E-01 4.537E-01 3.546E-01 2.856E-01 2.259E-01 1.754E-01 1.337E-01 9.994E-02 7.327E-02 5.267E-02 3.711E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.563E-02 1.734E-02 1.150E-02 7.466E-03 4.748E-03 2.957E-03 1.803E-03 1.076E-03 6.291E-04 3.599E-04 2.015E-04 1.104E-04 5.921E-05 3.107E-05 1.595E-05 8.015E-06 3.940E-06 1.895E-06 8.913E-07 4.102E-07 1.847E-07 8.133E-08 3.503E-08 1.476E-08 6.084E-09 2.453E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.100E-01 7.938E-01 6.792E-01 5.684E-01 4.632E-01 3.649E-01 2.961E-01 2.362E-01 1.852E-01 1.425E-01 1.078E-01 7.997E-02 5.825E-02 4.162E-02 2.918E-02 2.007E-02 1.353E-02 8.945E-03 5.798E-03 3.684E-03 2.294E-03 1.400E-03 8.373E-04 4.906E-04 2.817E-04 1.584E-04 8.729E-05 4.711E-05 2.490E-05

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.290E-05 6.539E-06 3.248E-06 1.579E-06 7.522E-07 3.508E-07 1.602E-07 7.163E-08 3.136E-08 1.344E-08 5.643E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.118E-01 7.977E-01 6.852E-01 5.761E-01 4.722E-01 3.747E-01 3.062E-01 2.462E-01 1.946E-01 1.512E-01 1.155E-01 8.668E-02 6.389E-02 4.625E-02 3.287E-02 2.294E-02 1.571E-02 1.056E-02 6.964E-03 4.506E-03 2.861E-03 1.781E-03 1.088E-03 6.517E-04 3.828E-04 2.205E-04 1.245E-04 6.896E-05 3.744E-05 1.993E-05 1.040E-05 5.317E-06 2.666E-06 1.310E-06 6.309E-07 2.978E-07 1.378E-07 6.248E-08 2.776E-08 1.209E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.134E-01 8.015E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.908E-01 5.833E-01 4.807E-01 3.841E-01 3.159E-01 2.557E-01 2.038E-01 1.597E-01 1.232E-01 9.337E-02 6.959E-02 5.098E-02 3.669E-02 2.595E-02 1.803E-02 1.230E-02 8.244E-03 5.425E-03 3.505E-03 2.223E-03 1.384E-03 8.461E-04 5.075E-04 2.988E-04 1.726E-04 9.788E-05 5.445E-05 2.972E-05 1.592E-05 8.364E-06 4.312E-06 2.180E-06 1.082E-06 5.264E-07 2.513E-07 1.176E-07 5.403E-08 2.434E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.150E-01 8.050E-01 6.961E-01 5.902E-01 4.887E-01 3.930E-01 3.252E-01 2.650E-01 2.127E-01 1.681E-01 1.307E-01 1.000E-01 7.532E-02 5.578E-02 4.062E-02 2.909E-02 2.048E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.417E-02 9.635E-03 6.439E-03 4.228E-03 2.728E-03 1.729E-03 1.077E-03 6.584E-04 3.955E-04 2.333E-04 1.352E-04 7.692E-05 4.298E-05 2.358E-05 1.270E-05 6.717E-06 3.487E-06 1.778E-06 8.897E-07 4.371E-07 2.108E-07 9.979E-08 4.638E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.164E-01 8.083E-01 7.012E-01 5.967E-01 4.965E-01 4.016E-01 3.341E-01 2.739E-01 2.214E-01 1.762E-01 1.382E-01 1.067E-01 8.107E-02 6.064E-02 4.464E-02 3.234E-02 2.304E-02 1.615E-02 1.113E-02 7.547E-03 5.031E-03 3.297E-03 2.125E-03 1.346E-03 8.379E-04 5.128E-04 3.084E-04 1.823E-04 1.059E-04 6.045E-05 3.391E-05 1.869E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.012E-05 5.385E-06 2.815E-06 1.445E-06 7.293E-07 3.614E-07 1.760E-07 8.417E-08
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.178E-01 8.114E-01 7.059E-01 6.029E-01 5.038E-01 4.098E-01 3.426E-01 2.826E-01 2.298E-01 1.842E-01 1.455E-01 1.132E-01 8.682E-02 6.556E-02 4.875E-02 3.569E-02 2.572E-02 1.824E-02 1.273E-02 8.748E-03 5.913E-03 3.932E-03 2.573E-03 1.656E-03 1.048E-03 6.525E-04 3.995E-04 2.406E-04 1.425E-04 8.297E-05 4.750E-05 2.674E-05 1.480E-05 8.057E-06 4.311E-06 2.267E-06 1.172E-06 5.960E-07 2.978E-07 1.463E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.191E-01 8.144E-01 7.105E-01 6.088E-01 5.108E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.177E-01 3.509E-01 2.909E-01 2.380E-01 1.920E-01 1.527E-01 1.198E-01 9.257E-02 7.051E-02 5.292E-02 3.912E-02 2.849E-02 2.044E-02 1.443E-02 1.004E-02 6.874E-03 4.633E-03 3.074E-03 2.008E-03 1.291E-03 8.166E-04 5.084E-04 3.115E-04 1.878E-04 1.114E-04 6.501E-05 3.733E-05 2.109E-05 1.172E-05 6.408E-06 3.446E-06 1.823E-06 9.489E-07 4.857E-07 2.446E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.209E-01 8.184E-01 7.165E-01 6.167E-01 5.202E-01 4.282E-01 3.620E-01 3.022E-01 2.490E-01 2.026E-01 1.626E-01 1.288E-01 1.006E-01 7.748E-02 5.885E-02 4.407E-02 3.253E-02 2.367E-02 1.697E-02 1.199E-02

	6.056E+00	8.349E-03
	6.358E+00	5.727E-03
	6.660E+00	3.870E-03
	6.963E+00	2.576E-03
	7.265E+00	1.689E-03
	7.567E+00	1.091E-03
	7.869E+00	6.938E-04
	8.171E+00	4.346E-04
	8.473E+00	2.681E-04
	8.775E+00	1.629E-04
	9.077E+00	9.742E-05
	9.379E+00	5.738E-05
	9.681E+00	3.327E-05
	9.983E+00	1.900E-05
	1.029E+01	1.068E-05
	1.059E+01	5.910E-06
	1.089E+01	3.220E-06
	1.119E+01	1.727E-06
	1.149E+01	9.121E-07
	1.180E+01	4.741E-07

NOTICE

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SENSITIVITY RUN #10
WADSWORTH FORMATION
ESTIMATED EFFECTIVE POROSITY = 0.21

Minimum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens10

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.21	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.902E-03 1.683E-04 8.999E-06 3.063E-07 6.600E-09 9.015E-11 9.279E-13 4.919E-14 1.115E-14 2.444E-15 4.756E-16 8.166E-17 1.232E-17 1.625E-18 1.864E-19 1.849E-20 1.576E-21 1.146E-22 7.063E-24 3.661E-25 1.589E-26 5.834E-28 2.003E-29 9.780E-31 9.769E-32 1.298E-32 1.696E-33 2.056E-34 2.290E-35 2.336E-36 2.178E-37 1.851E-38 1.429E-39 1.000E-40 6.334E-42 3.628E-43
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.874E-02 2.542E-02 7.149E-03 1.519E-03 2.594E-04 3.547E-05 3.870E-06 3.365E-07 2.326E-08 1.278E-09 5.610E-11

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.148E-12 1.482E-13 3.874E-14 1.395E-14 4.867E-15 1.601E-15 4.953E-16 1.439E-16 3.921E-17 9.998E-18 2.382E-18 5.294E-19 1.095E-19 2.104E-20 3.746E-21 6.165E-22 9.356E-23 1.306E-23 1.673E-24 1.961E-25 2.102E-26 2.070E-27 1.912E-28 1.793E-29 2.072E-30 3.525E-31
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 7.743E-01 5.026E-01 2.900E-01 1.477E-01 6.641E-02 2.768E-02 9.425E-03 2.781E-03 7.095E-04 1.561E-04 2.960E-05 4.825E-06 6.758E-07 8.124E-08 8.378E-09 7.412E-10 5.658E-11 3.918E-12 3.442E-13 7.770E-14 3.167E-14 1.383E-14 5.868E-15 2.394E-15 9.378E-16 3.524E-16 1.269E-16 4.379E-17 1.445E-17

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.561E-18 1.374E-18 3.951E-19 1.082E-19 2.821E-20 6.991E-21 1.645E-21 3.669E-22 7.748E-23 1.547E-23 2.916E-24
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.019E-01 5.592E-01 3.574E-01 2.085E-01 1.115E-01 5.674E-02 2.457E-02 9.574E-03 3.349E-03 1.050E-03 2.949E-04 7.404E-05 1.661E-05 3.325E-06 5.939E-07 9.457E-08 1.342E-08 1.697E-09 1.917E-10 1.957E-11 1.956E-12 2.716E-13 8.133E-14 3.731E-14 1.827E-14 8.802E-15 4.121E-15 1.872E-15 8.247E-16 3.521E-16 1.456E-16 5.830E-17 2.259E-17 8.460E-18 3.063E-18 1.071E-18 3.612E-19 1.175E-19 3.682E-20 1.111E-20
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.216E-01 6.005E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.098E-01 2.605E-01 1.552E-01 8.911E-02 4.470E-02 2.062E-02 8.740E-03 3.397E-03 1.209E-03 3.940E-04 1.174E-04 3.197E-05 7.950E-06 1.805E-06 3.738E-07 7.061E-08 1.216E-08 1.911E-09 2.740E-10 3.614E-11 4.552E-12 6.473E-13 1.538E-13 6.480E-14 3.350E-14 1.772E-14 9.217E-15 4.687E-15 2.327E-15 1.127E-15 5.324E-16 2.453E-16 1.101E-16 4.816E-17 2.052E-17 8.506E-18 3.431E-18 1.346E-18
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.366E-01 6.325E-01 4.520E-01 3.051E-01 1.956E-01 1.219E-01 6.753E-02 3.493E-02 1.684E-02 7.561E-03 3.157E-03 1.225E-03 4.416E-04 1.477E-04 4.585E-05 1.319E-05 3.519E-06

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.695E-07 1.990E-07 4.219E-08 8.279E-09 1.505E-09 2.536E-10 3.987E-11 6.013E-12 9.738E-13 2.264E-13 8.983E-14 4.720E-14 2.639E-14 1.471E-14 8.057E-15 4.330E-15 2.280E-15 1.176E-15 5.944E-16 2.941E-16 1.424E-16 6.750E-17 3.130E-17
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.486E-01 6.583E-01 4.870E-01 3.436E-01 2.325E-01 1.536E-01 9.149E-02 5.140E-02 2.720E-02 1.355E-02 6.345E-03 2.792E-03 1.154E-03 4.473E-04 1.627E-04 5.549E-05 1.774E-05 5.313E-06 1.491E-06 3.916E-07 9.635E-08 2.219E-08 4.783E-09 9.657E-10 1.828E-10 3.269E-11 5.669E-12 1.052E-12 2.644E-13 1.063E-13 5.691E-14 3.307E-14

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.934E-14 1.117E-14 6.352E-15 3.550E-15 1.950E-15 1.052E-15 5.577E-16 2.903E-16
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.584E-01 6.798E-01 5.167E-01 3.773E-01 2.660E-01 1.837E-01 1.156E-01 6.914E-02 3.927E-02 2.115E-02 1.080E-02 5.226E-03 2.393E-03 1.037E-03 4.251E-04 1.647E-04 6.035E-05 2.089E-05 6.829E-06 2.109E-06 6.147E-07 1.692E-07 4.396E-08 1.078E-08 2.495E-09 5.454E-10 1.128E-10 2.229E-11 4.337E-12 9.177E-13 2.602E-13 1.116E-13 6.184E-14 3.713E-14 2.253E-14 1.354E-14 8.031E-15 4.693E-15 2.701E-15 1.531E-15
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.667E-01 6.980E-01 5.424E-01 4.071E-01 2.964E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.120E-01 1.393E-01 8.751E-02 5.252E-02 3.009E-02 1.644E-02 8.566E-03 4.251E-03 2.009E-03 9.041E-04 3.871E-04 1.577E-04 6.109E-05 2.250E-05 7.880E-06 2.622E-06 8.294E-07 2.492E-07 7.114E-08 1.929E-08 4.968E-09 1.216E-09 2.830E-10 6.286E-11 1.348E-11 2.906E-12 7.026E-13 2.297E-13 1.080E-13 6.254E-14 3.871E-14 2.419E-14 1.500E-14 9.194E-15 5.562E-15
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 8.738E-01 7.137E-01 5.648E-01 4.335E-01 3.241E-01 2.384E-01 1.622E-01 1.061E-01 6.656E-02 4.007E-02 2.312E-02 1.278E-02 6.768E-03 3.430E-03 1.663E-03 7.715E-04 3.422E-04 1.451E-04 5.881E-05 2.278E-05

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.429E-06 2.979E-06 1.006E-06 3.243E-07 9.986E-08 2.935E-08 8.239E-09 2.208E-09 5.653E-10 1.385E-10 3.266E-11 7.541E-12 1.798E-12 5.019E-13 1.914E-13 9.918E-14 6.016E-14 3.831E-14 2.453E-14 1.560E-14
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 8.801E-01 7.276E-01 5.847E-01 4.573E-01 3.494E-01 2.630E-01 1.843E-01 1.245E-01 8.105E-02 5.082E-02 3.067E-02 1.781E-02 9.942E-03 5.335E-03 2.751E-03 1.363E-03 6.481E-04 2.960E-04 1.297E-04 5.458E-05 2.203E-05 8.531E-06 3.169E-06 1.129E-06 3.857E-07 1.264E-07 3.969E-08 1.195E-08 3.452E-09 9.560E-10 2.542E-10 6.507E-11 1.619E-11 4.022E-12 1.072E-12

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.505E-13 1.560E-13 8.843E-14 5.593E-14 3.650E-14
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.856E-01 7.398E-01 6.024E-01 4.787E-01 3.725E-01 2.860E-01 2.053E-01 1.426E-01 9.575E-02 6.213E-02 3.893E-02 2.355E-02 1.374E-02 7.737E-03 4.200E-03 2.197E-03 1.108E-03 5.383E-04 2.519E-04 1.135E-04 4.928E-05 2.059E-05 8.283E-06 3.207E-06 1.195E-06 4.285E-07 1.479E-07 4.910E-08 1.568E-08 4.821E-09 1.426E-09 4.061E-10 1.116E-10 2.973E-11 7.803E-12 2.103E-12 6.385E-13 2.479E-13 1.270E-13 7.754E-14
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 8.905E-01 7.507E-01 6.184E-01 4.982E-01 3.938E-01 3.075E-01 2.254E-01 1.603E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.105E-01 7.380E-02 4.775E-02 2.990E-02 1.812E-02 1.063E-02 6.025E-03 3.302E-03 1.750E-03 8.959E-04 4.432E-04 2.118E-04 9.773E-05 4.356E-05 1.874E-05 7.788E-06 3.124E-06 1.209E-06 4.519E-07 1.630E-07 5.671E-08 1.905E-08 6.173E-09 1.931E-09 5.830E-10 1.702E-10 4.820E-11 1.337E-11 3.725E-12 1.110E-12 3.936E-13 1.813E-13
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 8.949E-01 7.606E-01 6.328E-01 5.160E-01 4.135E-01 3.275E-01 2.444E-01 1.774E-01 1.251E-01 8.570E-02 5.699E-02 3.678E-02 2.303E-02 1.398E-02 8.229E-03 4.695E-03 2.595E-03 1.390E-03 7.212E-04 3.623E-04 1.763E-04 8.304E-05 3.787E-05

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.672E-05 7.141E-06 2.952E-06 1.181E-06 4.573E-07 1.713E-07 6.207E-08 2.176E-08 7.381E-09 2.422E-09 7.692E-10 2.367E-10 7.070E-11 2.064E-11 5.991E-12 1.802E-12 6.103E-13
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 8.989E-01 7.695E-01 6.460E-01 5.323E-01 4.317E-01 3.462E-01 2.625E-01 1.940E-01 1.395E-01 9.769E-02 6.654E-02 4.408E-02 2.839E-02 1.777E-02 1.080E-02 6.381E-03 3.661E-03 2.039E-03 1.102E-03 5.786E-04 2.947E-04 1.456E-04 6.984E-05 3.249E-05 1.466E-05 6.417E-06 2.724E-06 1.121E-06 4.477E-07 1.733E-07 6.505E-08 2.367E-08 8.354E-09 2.858E-09 9.485E-10 3.055E-10 9.565E-11 2.926E-11

	1.149E+01 1.180E+01	8.847E-12 2.723E-12
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.025E-01 7.777E-01 6.580E-01 5.473E-01 4.485E-01 3.638E-01 2.797E-01 2.099E-01 1.537E-01 1.097E-01 7.631E-02 5.172E-02 3.415E-02 2.195E-02 1.373E-02 8.363E-03 4.955E-03 2.856E-03 1.601E-03 8.731E-04 4.629E-04 2.386E-04 1.196E-04 5.825E-05 2.758E-05 1.269E-05 5.673E-06 2.465E-06 1.040E-06 4.267E-07 1.700E-07 6.582E-08 2.475E-08 9.043E-09 3.209E-09 1.107E-09 3.711E-10 1.211E-10 3.863E-11 1.215E-11
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.059E-01 7.852E-01 6.691E-01 5.612E-01 4.643E-01 3.803E-01 2.961E-01 2.253E-01 1.675E-01 1.216E-01 8.622E-02

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.964E-02 4.024E-02 2.649E-02 1.700E-02 1.063E-02 6.483E-03 3.852E-03 2.230E-03 1.258E-03 6.908E-04 3.696E-04 1.926E-04 9.769E-05 4.825E-05 2.320E-05 1.086E-05 4.948E-06 2.194E-06 9.472E-07 3.979E-07 1.626E-07 6.470E-08 2.505E-08 9.435E-09 3.458E-09 1.234E-09 4.287E-10 1.452E-10 4.809E-11
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.089E-01 7.921E-01 6.794E-01 5.741E-01 4.789E-01 3.958E-01 3.116E-01 2.402E-01 1.810E-01 1.335E-01 9.620E-02 6.776E-02 4.663E-02 3.134E-02 2.057E-02 1.318E-02 8.244E-03 5.032E-03 2.998E-03 1.742E-03 9.877E-04 5.462E-04 2.946E-04 1.549E-04 7.947E-05 3.974E-05

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.938E-05 9.210E-06 4.268E-06 1.928E-06 8.487E-07 3.642E-07 1.523E-07 6.208E-08 2.466E-08 9.546E-09 3.602E-09 1.325E-09 4.751E-10 1.663E-10
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.118E-01 7.984E-01 6.889E-01 5.861E-01 4.927E-01 4.104E-01 3.264E-01 2.544E-01 1.942E-01 1.452E-01 1.062E-01 7.603E-02 5.324E-02 3.647E-02 2.442E-02 1.599E-02 1.023E-02 6.400E-03 3.911E-03 2.335E-03 1.362E-03 7.757E-04 4.316E-04 2.345E-04 1.244E-04 6.443E-05 3.258E-05 1.608E-05 7.752E-06 3.646E-06 1.674E-06 7.503E-07 3.282E-07 1.401E-07 5.836E-08 2.372E-08 9.412E-09 3.644E-09 1.377E-09 5.082E-10

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.144E-01 8.044E-01 6.977E-01 5.973E-01 5.056E-01 4.242E-01 3.405E-01 2.681E-01 2.070E-01 1.566E-01 1.162E-01 8.440E-02 6.005E-02 4.184E-02 2.854E-02 1.905E-02 1.245E-02 7.955E-03 4.975E-03 3.043E-03 1.820E-03 1.065E-03 6.093E-04 3.408E-04 1.864E-04 9.966E-05 5.208E-05 2.660E-05 1.328E-05 6.481E-06 3.091E-06 1.440E-06 6.559E-07 2.919E-07 1.269E-07 5.392E-08 2.238E-08 9.078E-09 3.598E-09 1.393E-09
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.168E-01 8.098E-01 7.060E-01 6.078E-01 5.177E-01 4.373E-01 3.539E-01 2.813E-01 2.194E-01 1.679E-01 1.261E-01 9.283E-02 6.701E-02 4.742E-02

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.288E-02 2.234E-02 1.487E-02 9.695E-03 6.191E-03 3.871E-03 2.370E-03 1.420E-03 8.335E-04 4.787E-04 2.691E-04 1.481E-04 7.971E-05 4.200E-05 2.165E-05 1.092E-05 5.389E-06 2.602E-06 1.229E-06 5.679E-07 2.567E-07 1.135E-07 4.908E-08 2.076E-08 8.592E-09 3.478E-09
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.191E-01 8.150E-01 7.137E-01 6.176E-01 5.291E-01 4.497E-01 3.667E-01 2.939E-01 2.314E-01 1.790E-01 1.359E-01 1.013E-01 7.409E-02 5.317E-02 3.743E-02 2.584E-02 1.750E-02 1.161E-02 7.559E-03 4.822E-03 3.015E-03 1.847E-03 1.109E-03 6.526E-04 3.761E-04 2.124E-04 1.175E-04 6.367E-05 3.379E-05

	8.775E+00 8.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.757E-05 8.944E-06 4.460E-06 2.178E-06 1.041E-06 4.876E-07 2.235E-07 1.004E-07 4.411E-08 1.899E-08 8.001E-09
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.212E-01 8.198E-01 7.209E-01 6.269E-01 5.399E-01 4.614E-01 3.789E-01 3.061E-01 2.431E-01 1.898E-01 1.456E-01 1.097E-01 8.125E-02 5.906E-02 4.216E-02 2.954E-02 2.031E-02 1.371E-02 9.078E-03 5.898E-03 3.759E-03 2.350E-03 1.441E-03 8.667E-04 5.112E-04 2.956E-04 1.676E-04 9.320E-05 5.080E-05 2.715E-05 1.422E-05 7.302E-06 3.675E-06 1.813E-06 8.768E-07 4.156E-07 1.930E-07 8.788E-08 3.921E-08 1.714E-08
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.232E-01 8.243E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.277E-01 6.356E-01 5.500E-01 4.725E-01 3.906E-01 3.178E-01 2.545E-01 2.004E-01 1.552E-01 1.182E-01 8.846E-02 6.508E-02 4.704E-02 3.341E-02 2.331E-02 1.597E-02 1.074E-02 7.099E-03 4.605E-03 2.933E-03 1.834E-03 1.125E-03 6.777E-04 4.006E-04 2.324E-04 1.323E-04 7.388E-05 4.049E-05 2.177E-05 1.149E-05 5.944E-06 3.018E-06 1.503E-06 7.344E-07 3.520E-07 1.655E-07 7.630E-08 3.451E-08
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.251E-01 8.285E-01 7.341E-01 6.439E-01 5.597E-01 4.831E-01 4.018E-01 3.291E-01 2.654E-01 2.107E-01 1.646E-01 1.266E-01 9.571E-02 7.119E-02 5.206E-02 3.744E-02 2.646E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.839E-02 1.255E-02 8.425E-03 5.555E-03 3.598E-03 2.290E-03 1.432E-03 8.791E-04 5.302E-04 3.140E-04 1.827E-04 1.044E-04 5.854E-05 3.224E-05 1.744E-05 9.259E-06 4.827E-06 2.470E-06 1.241E-06 6.122E-07 2.965E-07 1.409E-07 6.575E-08
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.268E-01 8.325E-01 7.401E-01 6.516E-01 5.689E-01 4.932E-01 4.125E-01 3.400E-01 2.761E-01 2.208E-01 1.739E-01 1.349E-01 1.030E-01 7.737E-02 5.720E-02 4.161E-02 2.977E-02 2.095E-02 1.450E-02 9.873E-03 6.608E-03 4.349E-03 2.813E-03 1.789E-03 1.118E-03 6.872E-04 4.150E-04 2.463E-04 1.437E-04 8.233E-05 4.637E-05 2.566E-05

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.395E-05 7.452E-06 3.911E-06 2.017E-06 1.021E-06 5.083E-07 2.485E-07 1.193E-07
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.285E-01 8.363E-01 7.458E-01 6.590E-01 5.776E-01 5.028E-01 4.227E-01 3.504E-01 2.864E-01 2.307E-01 1.831E-01 1.431E-01 1.102E-01 8.361E-02 6.244E-02 4.590E-02 3.322E-02 2.366E-02 1.659E-02 1.144E-02 7.766E-03 5.185E-03 3.406E-03 2.201E-03 1.399E-03 8.745E-04 5.376E-04 3.250E-04 1.933E-04 1.130E-04 6.496E-05 3.672E-05 2.040E-05 1.115E-05 5.989E-06 3.163E-06 1.642E-06 8.380E-07 4.204E-07 2.073E-07
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.301E-01 8.399E-01 7.512E-01 6.660E-01 5.858E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.120E-01 4.325E-01 3.605E-01 2.964E-01 2.403E-01 1.920E-01 1.513E-01 1.175E-01 8.989E-02 6.776E-02 5.031E-02 3.680E-02 2.650E-02 1.880E-02 1.313E-02 9.026E-03 6.109E-03 4.070E-03 2.669E-03 1.723E-03 1.094E-03 6.841E-04 4.208E-04 2.547E-04 1.517E-04 8.889E-05 5.125E-05 2.907E-05 1.622E-05 8.903E-06 4.807E-06 2.553E-06 1.334E-06 6.857E-07 3.466E-07
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.322E-01 8.445E-01 7.583E-01 6.753E-01 5.968E-01 5.242E-01 4.456E-01 3.740E-01 3.099E-01 2.533E-01 2.043E-01 1.626E-01 1.276E-01 9.872E-02 7.531E-02 5.664E-02 4.199E-02 3.068E-02 2.209E-02 1.568E-02

	6.056E+00	1.096E-02
	6.358E+00	7.549E-03
	6.660E+00	5.122E-03
	6.963E+00	3.423E-03
	7.265E+00	2.254E-03
	7.567E+00	1.461E-03
	7.869E+00	9.333E-04
	8.171E+00	5.870E-04
	8.473E+00	3.636E-04
	8.775E+00	2.217E-04
	9.077E+00	1.332E-04
	9.379E+00	7.875E-05
	9.681E+00	4.585E-05
	9.983E+00	2.629E-05
	1.029E+01	1.484E-05
	1.059E+01	8.244E-06
	1.089E+01	4.509E-06
	1.119E+01	2.428E-06
	1.149E+01	1.287E-06
	1.180E+01	6.719E-07

NOTICE

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SENSITIVITY RUN #11
WADSWORTH FORMATION
THICKNESS = 13.29 m (43.6 ft.)

Maximum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens11

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	13.29 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.901E-03 1.549E-04 3.204E-06 3.103E-08 1.397E-10 4.062E-13 2.181E-14 3.203E-15 3.895E-16 3.841E-17 3.041E-18 1.912E-19 9.427E-21 3.595E-22 1.045E-23 2.278E-25 3.693E-27 4.752E-29 8.660E-31 4.725E-32 3.482E-33 2.326E-34 1.351E-35 6.771E-37 2.912E-38 1.068E-39 3.323E-41 8.738E-43 1.958E-44 3.984E-46 9.397E-48 3.589E-49 1.910E-50 0.000E+00 0.000E+00 0.000E+00
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.872E-02 2.530E-02 6.577E-03 8.485E-04 7.573E-05 4.644E-06 1.947E-07 5.558E-09 1.083E-10 1.613E-12 7.518E-14

	5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.801E-14 4.662E-15 1.096E-15 2.322E-16 4.424E-17 7.549E-18 1.149E-18 1.555E-19 1.861E-20 1.961E-21 1.809E-22 1.453E-23 1.011E-24 6.066E-26 3.140E-27 1.447E-28 7.012E-30 5.467E-31 7.431E-32 1.185E-32 1.840E-33 2.679E-34 3.635E-35 4.585E-36 5.365E-37 5.811E-38
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01	1.000E+00 7.742E-01 5.025E-01 2.900E-01 1.475E-01 6.568E-02 2.547E-02 6.133E-03 1.161E-03 1.718E-04 1.981E-05 1.773E-06 1.231E-07 6.606E-09 2.745E-10 9.081E-12 3.496E-13 5.515E-14 1.831E-14 6.110E-15 1.913E-15 5.596E-16 1.526E-16 3.872E-17 9.127E-18 1.994E-18 4.028E-19 7.507E-20 1.288E-20 2.026E-21

	1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	2.919E-22 3.835E-23 4.583E-24 4.968E-25 4.874E-26 4.335E-27 3.552E-28 2.865E-29 2.771E-30 4.065E-31 8.283E-32
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 8.019E-01 5.591E-01 3.571E-01 2.078E-01 1.096E-01 5.220E-02 1.728E-02 4.789E-03 1.106E-03 2.124E-04 3.379E-05 4.450E-06 4.841E-07 4.345E-08 3.216E-09 1.966E-10 1.017E-11 5.682E-13 8.562E-14 3.054E-14 1.205E-14 4.579E-15 1.655E-15 5.682E-16 1.851E-16 5.711E-17 1.668E-17 4.604E-18 1.199E-18 2.944E-19 6.800E-20 1.475E-20 3.001E-21 5.714E-22 1.016E-22 1.684E-23 2.598E-24 3.721E-25 4.946E-26 6.107E-27
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.215E-01 6.002E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	4.091E-01 2.590E-01 1.517E-01 8.198E-02 3.297E-02 1.152E-02 3.484E-03 9.102E-04 2.050E-04 3.971E-05 6.612E-06 9.449E-07 1.158E-07 1.216E-08 1.094E-09 8.472E-11 5.854E-12 4.704E-13 9.124E-14 3.583E-14 1.566E-14 6.680E-15 2.740E-15 1.079E-15 4.075E-16 1.475E-16 5.113E-17 1.696E-17 5.375E-18 1.627E-18 4.695E-19 1.291E-19 3.379E-20 8.405E-21 1.984E-21 4.441E-22 9.408E-23 1.884E-23
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00	1.000E+00 8.364E-01 6.320E-01 4.508E-01 3.025E-01 1.904E-01 1.121E-01 5.143E-02 2.101E-02 7.619E-03 2.448E-03 6.957E-04 1.746E-04 3.865E-05 7.538E-06 1.294E-06 1.956E-07 2.598E-08

	6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	3.033E-09 3.117E-10 2.846E-11 2.473E-12 2.912E-13 7.944E-14 3.503E-14 1.649E-14 7.601E-15 3.392E-15 1.463E-15 6.097E-16 2.453E-16 9.520E-17 3.563E-17 1.285E-17 4.460E-18 1.489E-18 4.781E-19 1.474E-19 4.361E-20 1.237E-20 3.359E-21
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01	1.000E+00 8.482E-01 6.574E-01 4.850E-01 3.397E-01 2.254E-01 1.413E-01 7.131E-02 3.261E-02 1.348E-02 5.026E-03 1.688E-03 5.101E-04 1.385E-04 3.375E-05 7.380E-06 1.446E-06 2.540E-07 3.995E-08 5.626E-09 7.096E-10 8.048E-11 8.414E-12 9.307E-13 1.704E-13 6.362E-14 3.092E-14 1.539E-14 7.501E-15 3.555E-15 1.636E-15 7.313E-16 3.172E-16

	1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.334E-16 5.439E-17 2.148E-17 8.217E-18 3.041E-18 1.089E-18 3.766E-19 1.258E-19
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 8.578E-01 6.783E-01 5.139E-01 3.721E-01 2.570E-01 1.690E-01 9.171E-02 4.568E-02 2.084E-02 8.696E-03 3.313E-03 1.151E-03 3.645E-04 1.050E-04 2.754E-05 6.565E-06 1.422E-06 2.798E-07 4.999E-08 8.107E-09 1.194E-09 1.599E-10 1.972E-11 2.385E-12 3.662E-13 1.064E-13 4.938E-14 2.566E-14 1.332E-14 6.771E-15 3.357E-15 1.622E-15 7.640E-16 3.504E-16 1.565E-16 6.802E-17 2.876E-17 1.182E-17 4.722E-18 1.832E-18
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.659E-01 6.960E-01 5.386E-01 4.004E-01 2.856E-01

	1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.950E-01 1.120E-01 5.968E-02 2.942E-02 1.340E-02 5.635E-03 2.184E-03 7.796E-04 2.561E-04 7.736E-05 2.148E-05 5.480E-06 1.284E-06 2.761E-07 5.448E-08 9.866E-09 1.639E-09 2.503E-10 3.537E-11 4.788E-12 7.208E-13 1.721E-13 7.191E-14 3.772E-14 2.047E-14 1.097E-14 5.759E-15 2.957E-15 1.484E-15 7.278E-16 3.487E-16 1.631E-16 7.448E-17 3.319E-17 1.442E-17
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00	1.000E+00 8.728E-01 7.111E-01 5.600E-01 4.255E-01 3.115E-01 2.194E-01 1.320E-01 7.421E-02 3.894E-02 1.904E-02 8.664E-03 3.666E-03 1.441E-03 5.255E-04 1.779E-04 5.581E-05 1.623E-05 4.373E-06 1.091E-06 2.521E-07

	7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	5.389E-08 1.066E-08 1.953E-09 3.313E-10 5.233E-11 7.871E-12 1.238E-12 2.667E-13 9.899E-14 5.095E-14 2.842E-14 1.587E-14 8.719E-15 4.698E-15 2.480E-15 1.283E-15 6.499E-16 3.223E-16 1.565E-16 7.431E-17
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01	1.000E+00 8.788E-01 7.243E-01 5.789E-01 4.479E-01 3.351E-01 2.420E-01 1.513E-01 8.897E-02 4.915E-02 2.547E-02 1.237E-02 5.624E-03 2.392E-03 9.510E-04 3.533E-04 1.225E-04 3.968E-05 1.199E-05 3.379E-06 8.879E-07 2.175E-07 4.967E-08 1.057E-08 2.097E-09 3.880E-10 6.721E-11 1.108E-11 1.858E-12 3.875E-13 1.306E-13 6.486E-14 3.672E-14 2.115E-14 1.205E-14 6.754E-15

	1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	3.717E-15 2.008E-15 1.064E-15 5.536E-16 2.824E-16
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 8.840E-01 7.360E-01 5.957E-01 4.680E-01 3.566E-01 2.632E-01 1.699E-01 1.037E-01 5.983E-02 3.256E-02 1.669E-02 8.061E-03 3.663E-03 1.565E-03 6.283E-04 2.370E-04 8.394E-05 2.790E-05 8.705E-06 2.548E-06 6.992E-07 1.800E-07 4.342E-08 9.821E-09 2.082E-09 4.143E-10 7.758E-11 1.386E-11 2.482E-12 5.216E-13 1.653E-13 7.899E-14 4.494E-14 2.651E-14 1.557E-14 9.012E-15 5.132E-15 2.874E-15 1.582E-15 8.561E-16
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00	1.000E+00 8.886E-01 7.463E-01 6.107E-01 4.863E-01 3.764E-01 2.829E-01 1.877E-01 1.184E-01

	2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	7.082E-02 4.017E-02 2.157E-02 1.096E-02 5.268E-03 2.392E-03 1.026E-03 4.155E-04 1.588E-04 5.724E-05 1.946E-05 6.239E-06 1.885E-06 5.370E-07 1.441E-07 3.643E-08 8.678E-09 1.947E-09 4.121E-10 8.246E-11 1.578E-11 3.011E-12 6.512E-13 2.004E-13 9.273E-14 5.278E-14 3.171E-14 1.908E-14 1.135E-14 6.655E-15 3.842E-15 2.183E-15
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00	1.000E+00 8.928E-01 7.556E-01 6.242E-01 5.028E-01 3.946E-01 3.014E-01 2.048E-01 1.328E-01 8.199E-02 4.819E-02 2.693E-02 1.430E-02 7.212E-03 3.451E-03 1.567E-03 6.742E-04 2.750E-04 1.063E-04 3.891E-05 1.349E-05 4.427E-06 1.375E-06 4.043E-07

	8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.125E-07 2.961E-08 7.373E-09 1.737E-09 3.876E-10 8.213E-11 1.670E-11 3.379E-12 7.593E-13 2.324E-13 1.054E-13 5.995E-14 3.654E-14 2.244E-14 1.367E-14 8.213E-15 4.867E-15
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01	1.000E+00 8.965E-01 7.639E-01 6.365E-01 5.180E-01 4.115E-01 3.187E-01 2.211E-01 1.468E-01 9.322E-02 5.652E-02 3.270E-02 1.804E-02 9.488E-03 4.752E-03 2.266E-03 1.028E-03 4.438E-04 1.822E-04 7.112E-05 2.638E-05 9.302E-06 3.116E-06 9.916E-07 2.997E-07 8.603E-08 2.345E-08 6.070E-09 1.492E-09 3.487E-10 7.767E-11 1.666E-11 3.557E-12 8.344E-13 2.585E-13 1.164E-13 6.625E-14 4.086E-14 2.555E-14

	1.442E+01 1.482E+01	1.587E-14 9.743E-15
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 8.999E-01 7.716E-01 6.477E-01 5.320E-01 4.271E-01 3.349E-01 2.367E-01 1.606E-01 1.044E-01 6.508E-02 3.882E-02 2.215E-02 1.208E-02 6.297E-03 3.135E-03 1.490E-03 6.760E-04 2.926E-04 1.208E-04 4.756E-05 1.786E-05 6.390E-06 2.179E-06 7.083E-07 2.194E-07 6.472E-08 1.819E-08 4.872E-09 1.243E-09 3.025E-10 7.041E-11 1.584E-11 3.555E-12 8.721E-13 2.768E-13 1.251E-13 7.150E-14 4.459E-14 2.831E-14 1.789E-14
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00	1.000E+00 9.031E-01 7.785E-01 6.581E-01 5.449E-01 4.417E-01 3.502E-01 2.516E-01 1.739E-01 1.156E-01 7.379E-02 4.521E-02

	3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	2.658E-02 1.498E-02 8.087E-03 4.183E-03 2.071E-03 9.817E-04 4.453E-04 1.932E-04 8.016E-05 3.181E-05 1.207E-05 4.375E-06 1.516E-06 5.021E-07 1.589E-07 4.803E-08 1.387E-08 3.828E-09 1.010E-09 2.547E-10 6.165E-11 1.447E-11 3.403E-12 8.740E-13 2.866E-13 1.313E-13 7.564E-14 4.768E-14 3.068E-14
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00	1.000E+00 9.059E-01 7.849E-01 6.676E-01 5.569E-01 4.553E-01 3.646E-01 2.658E-01 1.869E-01 1.266E-01 8.259E-02 5.184E-02 3.129E-02 1.815E-02 1.011E-02 5.412E-03 2.779E-03 1.370E-03 6.477E-04 2.937E-04 1.277E-04 5.323E-05 2.127E-05 8.143E-06 2.988E-06 1.050E-06 3.537E-07

	9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.141E-07 3.525E-08 1.043E-08 2.956E-09 8.028E-10 2.091E-10 5.245E-11 1.280E-11 3.145E-12 8.459E-13 2.884E-13 1.349E-13 7.862E-14 5.010E-14
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 9.085E-01 7.908E-01 6.764E-01 5.680E-01 4.680E-01 3.782E-01 2.793E-01 1.994E-01 1.375E-01 9.143E-02 5.864E-02 3.625E-02 2.158E-02 1.237E-02 6.823E-03 3.621E-03 1.848E-03 9.070E-04 4.279E-04 1.940E-04 8.452E-05 3.537E-05 1.422E-05 5.491E-06 2.036E-06 7.250E-07 2.478E-07 8.133E-08 2.562E-08 7.748E-09 2.250E-09 6.273E-10 1.682E-10 4.356E-11 1.102E-11 2.822E-12 7.957E-13 2.833E-13 1.361E-13 8.050E-14

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 9.110E-01 7.963E-01 6.846E-01 5.784E-01 4.800E-01 3.910E-01 2.923E-01 2.116E-01 1.481E-01 1.003E-01 6.558E-02 4.142E-02 2.524E-02 1.484E-02 8.415E-03 4.599E-03 2.423E-03 1.230E-03 6.011E-04 2.830E-04 1.283E-04 5.599E-05 2.352E-05 9.510E-06 3.700E-06 1.385E-06 4.989E-07 1.729E-07 5.762E-08 1.848E-08 5.698E-09 1.691E-09 4.828E-10 1.329E-10 3.545E-11 9.279E-12 2.473E-12 7.314E-13 2.729E-13 1.353E-13
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00	1.000E+00 9.132E-01 8.014E-01 6.922E-01 5.881E-01 4.912E-01 4.031E-01 3.047E-01 2.233E-01 1.586E-01 1.091E-01 7.263E-02 4.677E-02 2.911E-02 1.752E-02

	5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.018E-02 5.716E-03 3.098E-03 1.621E-03 8.185E-04 3.988E-04 1.874E-04 8.494E-05 3.713E-05 1.565E-05 6.360E-06 2.492E-06 9.409E-07 3.425E-07 1.201E-07 4.061E-08 1.323E-08 4.154E-09 1.257E-09 3.669E-10 1.035E-10 2.836E-11 7.664E-12 2.125E-12 6.602E-13 2.589E-13
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01	1.000E+00 9.153E-01 8.062E-01 6.994E-01 5.973E-01 5.019E-01 4.147E-01 3.165E-01 2.347E-01 1.689E-01 1.179E-01 7.974E-02 5.226E-02 3.317E-02 2.038E-02 1.212E-02 6.972E-03 3.879E-03 2.086E-03 1.085E-03 5.452E-04 2.647E-04 1.242E-04 5.630E-05 2.465E-05 1.042E-05 4.254E-06 1.677E-06 6.384E-07 2.346E-07

	1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	8.322E-08 2.850E-08 9.420E-09 3.006E-09 9.263E-10 2.758E-10 7.955E-11 2.236E-11 6.232E-12 1.798E-12 5.877E-13
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 9.173E-01 8.107E-01 7.061E-01 6.059E-01 5.119E-01 4.256E-01 3.279E-01 2.457E-01 1.789E-01 1.265E-01 8.689E-02 5.788E-02 3.740E-02 2.343E-02 1.422E-02 8.365E-03 4.765E-03 2.629E-03 1.404E-03 7.260E-04 3.633E-04 1.759E-04 8.240E-05 3.734E-05 1.637E-05 6.941E-06 2.846E-06 1.129E-06 4.327E-07 1.604E-07 5.749E-08 1.992E-08 6.673E-09 2.161E-09 6.771E-10 2.054E-10 6.048E-11 1.742E-11 5.003E-12 1.504E-12
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.192E-01 8.148E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	7.124E-01 6.140E-01 5.214E-01 4.360E-01 3.388E-01 2.563E-01 1.887E-01 1.351E-01 9.406E-02 6.360E-02 4.177E-02 2.663E-02 1.648E-02 9.892E-03 5.760E-03 3.252E-03 1.780E-03 9.448E-04 4.859E-04 2.422E-04 1.169E-04 5.471E-05 2.479E-05 1.088E-05 4.626E-06 1.904E-06 7.592E-07 2.930E-07 1.095E-07 3.962E-08 1.388E-08 4.706E-09 1.545E-09 4.916E-10 1.517E-10 4.555E-11 1.343E-11 3.976E-12
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00	1.000E+00 9.209E-01 8.188E-01 7.184E-01 6.217E-01 5.304E-01 4.460E-01 3.492E-01 2.666E-01 1.983E-01 1.436E-01 1.012E-01 6.940E-02 4.627E-02 2.998E-02 1.888E-02 1.155E-02 6.861E-03

	6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	3.958E-03 2.217E-03 1.205E-03 6.355E-04 3.253E-04 1.615E-04 7.781E-05 3.635E-05 1.647E-05 7.239E-06 3.085E-06 1.275E-06 5.106E-07 1.983E-07 7.465E-08 2.724E-08 9.639E-09 3.306E-09 1.099E-09 3.548E-10 1.112E-10 3.403E-11 1.027E-11
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01	1.000E+00 9.225E-01 8.225E-01 7.240E-01 6.290E-01 5.390E-01 4.554E-01 3.593E-01 2.766E-01 2.077E-01 1.520E-01 1.084E-01 7.526E-02 5.087E-02 3.347E-02 2.142E-02 1.333E-02 8.069E-03 4.748E-03 2.715E-03 1.509E-03 8.148E-04 4.274E-04 2.178E-04 1.078E-04 5.180E-05 2.417E-05 1.095E-05 4.819E-06 2.058E-06 8.531E-07 3.433E-07 1.341E-07

	1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	5.083E-08 1.870E-08 6.678E-09 2.315E-09 7.790E-10 2.547E-10 8.109E-11 2.526E-11
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	1.000E+00 9.241E-01 8.260E-01 7.294E-01 6.359E-01 5.471E-01 4.645E-01 3.689E-01 2.862E-01 2.168E-01 1.602E-01 1.155E-01 8.115E-02 5.557E-02 3.707E-02 2.409E-02 1.524E-02 9.382E-03 5.623E-03 3.279E-03 1.860E-03 1.026E-03 5.507E-04 2.874E-04 1.458E-04 7.195E-05 3.450E-05 1.608E-05 7.288E-06 3.209E-06 1.373E-06 5.712E-07 2.308E-07 9.063E-08 3.458E-08 1.282E-08 4.617E-09 1.616E-09 5.498E-10 1.821E-10 5.881E-11
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.256E-01 8.294E-01 7.344E-01 6.424E-01 5.549E-01

	1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00 7.389E+00 7.780E+00 8.170E+00 8.561E+00 8.952E+00 9.343E+00 9.734E+00 1.012E+01 1.052E+01 1.091E+01 1.130E+01 1.169E+01 1.208E+01 1.247E+01 1.286E+01 1.325E+01 1.364E+01 1.403E+01 1.442E+01 1.482E+01	4.732E-01 3.782E-01 2.956E-01 2.257E-01 1.683E-01 1.226E-01 8.708E-02 6.035E-02 4.079E-02 2.687E-02 1.726E-02 1.080E-02 6.582E-03 3.908E-03 2.260E-03 1.272E-03 6.973E-04 3.721E-04 1.932E-04 9.768E-05 4.805E-05 2.300E-05 1.071E-05 4.852E-06 2.139E-06 9.171E-07 3.825E-07 1.552E-07 6.123E-08 2.350E-08 8.772E-09 3.185E-09 1.125E-09 3.868E-10 1.296E-10
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.916E+00 2.307E+00 2.698E+00 3.089E+00 3.480E+00 3.871E+00 4.262E+00 4.653E+00 5.043E+00 5.434E+00 5.825E+00 6.216E+00 6.607E+00 6.998E+00	1.000E+00 9.275E-01 8.337E-01 7.411E-01 6.511E-01 5.652E-01 4.847E-01 3.906E-01 3.081E-01 2.378E-01 1.795E-01 1.324E-01 9.539E-02 6.714E-02 4.614E-02 3.096E-02 2.027E-02 1.295E-02 8.066E-03 4.902E-03 2.905E-03

	7.389E+00	1.678E-03
	7.780E+00	9.454E-04
	8.170E+00	5.191E-04
	8.561E+00	2.778E-04
	8.952E+00	1.449E-04
	9.343E+00	7.361E-05
	9.734E+00	3.645E-05
	1.012E+01	1.758E-05
	1.052E+01	8.264E-06
	1.091E+01	3.784E-06
	1.130E+01	1.688E-06
	1.169E+01	7.331E-07
	1.208E+01	3.102E-07
	1.247E+01	1.278E-07
	1.286E+01	5.130E-08
	1.325E+01	2.005E-08
	1.364E+01	7.633E-09
	1.403E+01	2.830E-09
	1.442E+01	1.022E-09
	1.482E+01	3.598E-10

NOTICE

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SENSITIVITY RUN #12
WADSWORTH FORMATION
THICKNESS = 6.00 m (19.7 ft.)

Minimum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens12

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	6 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.901E-03 1.549E-04 2.951E-05 4.825E-06 6.760E-07 8.106E-08 8.311E-09 7.286E-10 5.486E-11 3.693E-12 2.967E-13 5.942E-14 2.325E-14 9.965E-15 4.157E-15 1.667E-15 6.412E-16 2.364E-16 8.351E-17 2.822E-17 9.117E-18 2.813E-18 8.281E-19 2.323E-19 6.203E-20 1.575E-20 3.796E-21 8.677E-22 1.878E-22 3.843E-23 7.424E-24 1.352E-24 2.319E-25 3.743E-26 5.688E-27 8.182E-28
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.872E-02 2.530E-02 6.577E-03 2.729E-03 1.052E-03 3.760E-04 1.246E-04 3.828E-05 1.089E-05 2.866E-06 6.980E-07

	3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.573E-07 3.276E-08 6.309E-09 1.123E-09 1.852E-10 2.844E-11 4.186E-12 6.639E-13 1.530E-13 6.047E-14 3.145E-14 1.733E-14 9.506E-15 5.123E-15 2.706E-15 1.401E-15 7.098E-16 3.521E-16 1.710E-16 8.122E-17 3.774E-17 1.714E-17 7.611E-18 3.302E-18 1.399E-18 5.787E-19
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00	1.000E+00 7.742E-01 5.025E-01 2.900E-01 1.475E-01 6.568E-02 2.547E-02 1.379E-02 7.116E-03 3.496E-03 1.634E-03 7.269E-04 3.074E-04 1.236E-04 4.721E-05 1.713E-05 5.905E-06 1.932E-06 6.004E-07 1.771E-07 4.956E-08 1.316E-08 3.317E-09 7.936E-10 1.804E-10 3.911E-11 8.201E-12 1.739E-12 4.221E-13 1.418E-13

	5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	6.812E-14 3.952E-14 2.422E-14 1.493E-14 9.120E-15 5.503E-15 3.276E-15 1.924E-15 1.114E-15 6.360E-16 3.580E-16
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 8.019E-01 5.591E-01 3.571E-01 2.078E-01 1.096E-01 5.220E-02 3.239E-02 1.939E-02 1.120E-02 6.231E-03 3.343E-03 1.727E-03 8.598E-04 4.121E-04 1.901E-04 8.442E-05 3.608E-05 1.483E-05 5.866E-06 2.232E-06 8.164E-07 2.872E-07 9.717E-08 3.160E-08 9.882E-09 2.971E-09 8.588E-10 2.389E-10 6.410E-11 1.669E-11 4.300E-12 1.152E-12 3.566E-13 1.444E-13 7.641E-14 4.709E-14 3.066E-14 2.020E-14 1.326E-14 8.638E-15
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.215E-01 6.002E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	4.091E-01 2.590E-01 1.517E-01 8.198E-02 5.528E-02 3.623E-02 2.308E-02 1.428E-02 8.584E-03 5.009E-03 2.837E-03 1.560E-03 8.320E-04 4.305E-04 2.161E-04 1.052E-04 4.966E-05 2.273E-05 1.008E-05 4.338E-06 1.809E-06 7.309E-07 2.862E-07 1.086E-07 3.995E-08 1.423E-08 4.915E-09 1.645E-09 5.334E-10 1.678E-10 5.136E-11 1.537E-11 4.569E-12 1.399E-12 4.751E-13 1.968E-13 1.028E-13 6.344E-14
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00	1.000E+00 8.364E-01 6.320E-01 4.508E-01 3.025E-01 1.904E-01 1.121E-01 7.999E-02 5.575E-02 3.795E-02 2.523E-02 1.637E-02 1.036E-02 6.403E-03 3.860E-03 2.269E-03 1.301E-03 7.275E-04

	3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	3.966E-04 2.107E-04 1.092E-04 5.512E-05 2.712E-05 1.300E-05 6.076E-06 2.766E-06 1.227E-06 5.301E-07 2.232E-07 9.151E-08 3.655E-08 1.422E-08 5.389E-09 1.989E-09 7.156E-10 2.509E-10 8.588E-11 2.878E-11 9.515E-12 3.158E-12 1.092E-12
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00	1.000E+00 8.482E-01 6.574E-01 4.850E-01 3.397E-01 2.254E-01 1.413E-01 1.050E-01 7.653E-02 5.466E-02 3.826E-02 2.623E-02 1.762E-02 1.159E-02 7.463E-03 4.706E-03 2.905E-03 1.755E-03 1.037E-03 6.002E-04 3.398E-04 1.882E-04 1.020E-04 5.405E-05 2.802E-05 1.421E-05 7.046E-06 3.417E-06 1.621E-06 7.517E-07 3.409E-07 1.512E-07 6.554E-08

	6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	2.778E-08 1.152E-08 4.666E-09 1.849E-09 7.164E-10 2.716E-10 1.008E-10 3.676E-11
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 8.578E-01 6.783E-01 5.139E-01 3.721E-01 2.570E-01 1.690E-01 1.296E-01 9.768E-02 7.235E-02 5.265E-02 3.764E-02 2.643E-02 1.823E-02 1.234E-02 8.203E-03 5.353E-03 3.428E-03 2.155E-03 1.329E-03 8.044E-04 4.776E-04 2.783E-04 1.590E-04 8.916E-05 4.903E-05 2.644E-05 1.399E-05 7.257E-06 3.692E-06 1.842E-06 9.012E-07 4.323E-07 2.034E-07 9.380E-08 4.242E-08 1.881E-08 8.175E-09 3.485E-09 1.456E-09 5.970E-10
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.659E-01 6.960E-01 5.386E-01 4.004E-01 2.856E-01

	1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.950E-01 1.533E-01 1.186E-01 9.042E-02 6.785E-02 5.012E-02 3.645E-02 2.608E-02 1.836E-02 1.272E-02 8.669E-03 5.811E-03 3.831E-03 2.484E-03 1.584E-03 9.931E-04 6.123E-04 3.711E-04 2.211E-04 1.295E-04 7.459E-05 4.222E-05 2.349E-05 1.284E-05 6.903E-06 3.646E-06 1.893E-06 9.655E-07 4.840E-07 2.384E-07 1.154E-07 5.489E-08 2.566E-08 1.178E-08 5.317E-09
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00	1.000E+00 8.728E-01 7.111E-01 5.600E-01 4.255E-01 3.115E-01 2.194E-01 1.758E-01 1.390E-01 1.085E-01 8.343E-02 6.329E-02 4.733E-02 3.489E-02 2.535E-02 1.816E-02 1.281E-02 8.909E-03 6.104E-03 4.120E-03 2.739E-03

	4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.794E-03 1.157E-03 7.354E-04 4.602E-04 2.836E-04 1.721E-04 1.028E-04 6.051E-05 3.506E-05 2.000E-05 1.123E-05 6.211E-06 3.381E-06 1.812E-06 9.559E-07 4.964E-07 2.538E-07 1.277E-07 6.326E-08 3.084E-08
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00	1.000E+00 8.788E-01 7.243E-01 5.789E-01 4.479E-01 3.351E-01 2.420E-01 1.972E-01 1.588E-01 1.262E-01 9.911E-02 7.683E-02 5.880E-02 4.443E-02 3.313E-02 2.438E-02 1.771E-02 1.269E-02 8.972E-03 6.259E-03 4.307E-03 2.924E-03 1.958E-03 1.293E-03 8.422E-04 5.411E-04 3.428E-04 2.142E-04 1.319E-04 8.015E-05 4.801E-05 2.836E-05 1.651E-05 9.480E-06 5.366E-06 2.994E-06

	6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.647E-06 8.934E-07 4.776E-07 2.517E-07 1.308E-07
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 8.840E-01 7.360E-01 5.957E-01 4.680E-01 3.566E-01 2.632E-01 2.175E-01 1.777E-01 1.436E-01 1.147E-01 9.054E-02 7.065E-02 5.449E-02 4.152E-02 3.127E-02 2.326E-02 1.709E-02 1.241E-02 8.898E-03 6.302E-03 4.408E-03 3.045E-03 2.077E-03 1.399E-03 9.306E-04 6.111E-04 3.963E-04 2.537E-04 1.603E-04 1.000E-04 6.161E-05 3.746E-05 2.248E-05 1.332E-05 7.790E-06 4.497E-06 2.562E-06 1.441E-06 7.997E-07 4.381E-07
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00	1.000E+00 8.886E-01 7.463E-01 6.107E-01 4.863E-01 3.764E-01 2.829E-01 2.366E-01 1.958E-01

	2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.604E-01 1.300E-01 1.042E-01 8.270E-02 6.491E-02 5.038E-02 3.868E-02 2.937E-02 2.205E-02 1.637E-02 1.202E-02 8.721E-03 6.257E-03 4.438E-03 3.112E-03 2.156E-03 1.477E-03 1.000E-03 6.692E-04 4.426E-04 2.892E-04 1.868E-04 1.192E-04 7.520E-05 4.686E-05 2.886E-05 1.756E-05 1.056E-05 6.272E-06 3.682E-06 2.135E-06 1.223E-06
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00	1.000E+00 8.928E-01 7.556E-01 6.242E-01 5.028E-01 3.946E-01 3.014E-01 2.546E-01 2.131E-01 1.766E-01 1.450E-01 1.178E-01 9.482E-02 7.555E-02 5.959E-02 4.652E-02 3.595E-02 2.749E-02 2.081E-02 1.558E-02 1.155E-02 8.469E-03 6.145E-03 4.411E-03

	4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	3.133E-03 2.201E-03 1.530E-03 1.052E-03 7.151E-04 4.810E-04 3.200E-04 2.106E-04 1.371E-04 8.822E-05 5.616E-05 3.536E-05 2.202E-05 1.356E-05 8.254E-06 4.970E-06 2.959E-06
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00	1.000E+00 8.965E-01 7.639E-01 6.365E-01 5.180E-01 4.115E-01 3.187E-01 2.717E-01 2.296E-01 1.922E-01 1.595E-01 1.312E-01 1.069E-01 8.631E-02 6.902E-02 5.468E-02 4.290E-02 3.334E-02 2.566E-02 1.956E-02 1.476E-02 1.103E-02 8.164E-03 5.981E-03 4.339E-03 3.116E-03 2.215E-03 1.559E-03 1.086E-03 7.492E-04 5.115E-04 3.456E-04 2.312E-04 1.530E-04 1.003E-04 6.502E-05 4.173E-05 2.651E-05 1.666E-05

	7.349E+00 7.526E+00	1.037E-05 6.382E-06
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 8.999E-01 7.716E-01 6.477E-01 5.320E-01 4.271E-01 3.349E-01 2.878E-01 2.453E-01 2.073E-01 1.737E-01 1.443E-01 1.189E-01 9.710E-02 7.860E-02 6.307E-02 5.016E-02 3.953E-02 3.088E-02 2.390E-02 1.833E-02 1.393E-02 1.049E-02 7.822E-03 5.781E-03 4.232E-03 3.070E-03 2.205E-03 1.569E-03 1.106E-03 7.725E-04 5.343E-04 3.660E-04 2.483E-04 1.669E-04 1.110E-04 7.319E-05 4.777E-05 3.088E-05 1.977E-05 1.253E-05
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00	1.000E+00 9.031E-01 7.785E-01 6.581E-01 5.449E-01 4.417E-01 3.502E-01 3.030E-01 2.602E-01 2.217E-01 1.874E-01 1.571E-01

	2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.307E-01 1.079E-01 8.826E-02 7.162E-02 5.764E-02 4.600E-02 3.640E-02 2.856E-02 2.222E-02 1.713E-02 1.310E-02 9.927E-03 7.458E-03 5.554E-03 4.100E-03 3.000E-03 2.175E-03 1.563E-03 1.114E-03 7.862E-04 5.500E-04 3.814E-04 2.620E-04 1.784E-04 1.204E-04 8.049E-05 5.333E-05 3.501E-05 2.277E-05
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00	1.000E+00 9.059E-01 7.849E-01 6.676E-01 5.569E-01 4.553E-01 3.646E-01 3.175E-01 2.745E-01 2.356E-01 2.007E-01 1.696E-01 1.423E-01 1.185E-01 9.793E-02 8.028E-02 6.530E-02 5.270E-02 4.219E-02 3.350E-02 2.639E-02 2.062E-02 1.598E-02 1.229E-02 9.366E-03 7.082E-03 5.310E-03

	5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	3.948E-03 2.912E-03 2.129E-03 1.544E-03 1.110E-03 7.912E-04 5.593E-04 3.920E-04 2.724E-04 1.877E-04 1.282E-04 8.682E-05 5.829E-05 3.880E-05
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 9.085E-01 7.908E-01 6.764E-01 5.680E-01 4.680E-01 3.782E-01 3.312E-01 2.881E-01 2.489E-01 2.135E-01 1.818E-01 1.537E-01 1.291E-01 1.076E-01 8.900E-02 7.308E-02 5.957E-02 4.819E-02 3.869E-02 3.082E-02 2.437E-02 1.912E-02 1.488E-02 1.150E-02 8.812E-03 6.701E-03 5.056E-03 3.784E-03 2.810E-03 2.070E-03 1.513E-03 1.097E-03 7.890E-04 5.629E-04 3.983E-04 2.796E-04 1.947E-04 1.345E-04 9.213E-05 6.260E-05

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 9.110E-01 7.963E-01 6.846E-01 5.784E-01 4.800E-01 3.910E-01 3.442E-01 3.011E-01 2.616E-01 2.258E-01 1.936E-01 1.649E-01 1.395E-01 1.172E-01 9.772E-02 8.094E-02 6.657E-02 5.436E-02 4.407E-02 3.548E-02 2.835E-02 2.249E-02 1.771E-02 1.384E-02 1.074E-02 8.271E-03 6.323E-03 4.797E-03 3.612E-03 2.700E-03 2.002E-03 1.474E-03 1.077E-03 7.805E-04 5.615E-04 4.009E-04 2.840E-04 1.997E-04 1.393E-04 9.641E-05
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00	1.000E+00 9.132E-01 8.014E-01 6.922E-01 5.881E-01 4.912E-01 4.031E-01 3.566E-01 3.135E-01 2.739E-01 2.378E-01 2.051E-01 1.758E-01 1.497E-01 1.266E-01

	3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.064E-01 8.885E-02 7.367E-02 6.068E-02 4.963E-02 4.032E-02 3.253E-02 2.607E-02 2.074E-02 1.639E-02 1.286E-02 1.002E-02 7.748E-03 5.951E-03 4.538E-03 3.436E-03 2.583E-03 1.927E-03 1.428E-03 1.050E-03 7.670E-04 5.560E-04 4.001E-04 2.858E-04 2.027E-04 1.427E-04
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00	1.000E+00 9.153E-01 8.062E-01 6.994E-01 5.973E-01 5.019E-01 4.147E-01 3.684E-01 3.253E-01 2.856E-01 2.493E-01 2.162E-01 1.864E-01 1.597E-01 1.360E-01 1.151E-01 9.677E-02 8.084E-02 6.710E-02 5.534E-02 4.534E-02 3.690E-02 2.984E-02 2.397E-02 1.912E-02 1.516E-02 1.193E-02 9.330E-03 7.246E-03 5.589E-03

	5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	4.282E-03 3.258E-03 2.462E-03 1.848E-03 1.377E-03 1.019E-03 7.492E-04 5.469E-04 3.964E-04 2.853E-04 2.039E-04
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 9.173E-01 8.107E-01 7.061E-01 6.059E-01 5.119E-01 4.256E-01 3.796E-01 3.367E-01 2.970E-01 2.604E-01 2.271E-01 1.968E-01 1.696E-01 1.453E-01 1.237E-01 1.047E-01 8.804E-02 7.360E-02 6.115E-02 5.049E-02 4.143E-02 3.378E-02 2.737E-02 2.203E-02 1.762E-02 1.401E-02 1.106E-02 8.680E-03 6.766E-03 5.240E-03 4.032E-03 3.082E-03 2.340E-03 1.765E-03 1.323E-03 9.848E-04 7.282E-04 5.349E-04 3.903E-04 2.829E-04
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.192E-01 8.148E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	7.124E-01 6.140E-01 5.214E-01 4.360E-01 3.903E-01 3.476E-01 3.078E-01 2.712E-01 2.375E-01 2.069E-01 1.792E-01 1.544E-01 1.322E-01 1.125E-01 9.526E-02 8.016E-02 6.706E-02 5.576E-02 4.609E-02 3.787E-02 3.093E-02 2.510E-02 2.025E-02 1.624E-02 1.294E-02 1.025E-02 8.067E-03 6.310E-03 4.905E-03 3.789E-03 2.908E-03 2.218E-03 1.681E-03 1.266E-03 9.476E-04 7.046E-04 5.206E-04 3.822E-04
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00	1.000E+00 9.209E-01 8.188E-01 7.184E-01 6.217E-01 5.304E-01 4.460E-01 4.006E-01 3.580E-01 3.183E-01 2.815E-01 2.477E-01 2.167E-01 1.887E-01 1.633E-01 1.406E-01 1.204E-01 1.025E-01

	3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	8.676E-02 7.303E-02 6.113E-02 5.087E-02 4.210E-02 3.463E-02 2.832E-02 2.303E-02 1.862E-02 1.496E-02 1.195E-02 9.490E-03 7.491E-03 5.878E-03 4.584E-03 3.554E-03 2.739E-03 2.098E-03 1.597E-03 1.208E-03 9.086E-04 6.791E-04 5.045E-04
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00	1.000E+00 9.225E-01 8.225E-01 7.240E-01 6.290E-01 5.390E-01 4.554E-01 4.104E-01 3.680E-01 3.284E-01 2.916E-01 2.575E-01 2.263E-01 1.979E-01 1.721E-01 1.489E-01 1.281E-01 1.097E-01 9.337E-02 7.906E-02 6.657E-02 5.576E-02 4.644E-02 3.846E-02 3.168E-02 2.595E-02 2.113E-02 1.711E-02 1.378E-02 1.103E-02 8.783E-03 6.951E-03 5.470E-03

	6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	4.280E-03 3.329E-03 2.575E-03 1.980E-03 1.513E-03 1.150E-03 8.686E-04 6.523E-04
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	1.000E+00 9.241E-01 8.260E-01 7.294E-01 6.359E-01 5.471E-01 4.645E-01 4.198E-01 3.776E-01 3.381E-01 3.012E-01 2.671E-01 2.357E-01 2.069E-01 1.807E-01 1.571E-01 1.358E-01 1.168E-01 9.998E-02 8.511E-02 7.208E-02 6.072E-02 5.088E-02 4.241E-02 3.516E-02 2.899E-02 2.377E-02 1.939E-02 1.573E-02 1.269E-02 1.018E-02 8.124E-03 6.446E-03 5.087E-03 3.991E-03 3.115E-03 2.417E-03 1.865E-03 1.431E-03 1.092E-03 8.281E-04
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.256E-01 8.294E-01 7.344E-01 6.424E-01 5.549E-01

	1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00 4.173E+00 4.349E+00 4.525E+00 4.702E+00 4.878E+00 5.055E+00 5.231E+00 5.408E+00 5.584E+00 5.761E+00 5.937E+00 6.114E+00 6.290E+00 6.467E+00 6.643E+00 6.820E+00 6.996E+00 7.173E+00 7.349E+00 7.526E+00	4.732E-01 4.288E-01 3.869E-01 3.475E-01 3.106E-01 2.764E-01 2.447E-01 2.157E-01 1.892E-01 1.651E-01 1.434E-01 1.239E-01 1.066E-01 9.119E-02 7.763E-02 6.576E-02 5.541E-02 4.645E-02 3.875E-02 3.215E-02 2.654E-02 2.179E-02 1.780E-02 1.446E-02 1.169E-02 9.394E-03 7.512E-03 5.975E-03 4.726E-03 3.719E-03 2.910E-03 2.265E-03 1.754E-03 1.350E-03 1.034E-03
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.702E+00 1.878E+00 2.055E+00 2.231E+00 2.408E+00 2.584E+00 2.761E+00 2.937E+00 3.114E+00 3.290E+00 3.467E+00 3.643E+00 3.820E+00 3.996E+00	1.000E+00 9.275E-01 8.337E-01 7.411E-01 6.511E-01 5.652E-01 4.847E-01 4.408E-01 3.993E-01 3.600E-01 3.232E-01 2.889E-01 2.570E-01 2.277E-01 2.007E-01 1.762E-01 1.539E-01 1.338E-01 1.158E-01 9.970E-02 8.546E-02

	4.173E+00	7.289E-02
	4.349E+00	6.187E-02
	4.525E+00	5.226E-02
	4.702E+00	4.393E-02
	4.878E+00	3.675E-02
	5.055E+00	3.058E-02
	5.231E+00	2.533E-02
	5.408E+00	2.087E-02
	5.584E+00	1.711E-02
	5.761E+00	1.396E-02
	5.937E+00	1.133E-02
	6.114E+00	9.152E-03
	6.290E+00	7.354E-03
	6.467E+00	5.878E-03
	6.643E+00	4.675E-03
	6.820E+00	3.699E-03
	6.996E+00	2.912E-03
	7.173E+00	2.280E-03
	7.349E+00	1.777E-03
	7.526E+00	1.377E-03

NOTICE

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SENSITIVITY RUN #12A
WADSWORTH FORMATION
SECONDARY MINIMUM THICKNESS = 7.71 m (25.3 ft.)

Secondary Minimum

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Secondary Minimum Out of Sump

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.000308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	7.71 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 6.457E-01 2.689E-01 7.766E-02 1.502E-02 1.901E-03 1.549E-04 1.789E-05 1.604E-06 1.113E-07 5.967E-09 2.471E-10 8.111E-12 3.000E-13 4.432E-14 1.442E-14 4.752E-15 1.469E-15 4.239E-16 1.140E-16 2.853E-17 6.629E-18 1.427E-18 2.838E-19 5.206E-20 8.782E-21 1.359E-21 1.922E-22 2.479E-23 2.906E-24 3.088E-25 2.967E-26 2.584E-27 2.076E-28 1.657E-29 1.617E-30 2.416E-31 4.925E-32 1.090E-32 2.374E-33 4.968E-34
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00	1.000E+00 7.308E-01 4.178E-01 1.997E-01 7.872E-02 2.530E-02 6.577E-03 2.096E-03 5.906E-04 1.470E-04 3.225E-05 6.232E-06 1.060E-06 1.585E-07 2.082E-08

	3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	2.403E-09 2.438E-10 2.198E-11 1.889E-12 2.224E-13 6.092E-14 2.666E-14 1.240E-14 5.645E-15 2.487E-15 1.059E-15 4.355E-16 1.729E-16 6.618E-17 2.442E-17 8.681E-18 2.970E-18 9.771E-19 3.089E-19 9.376E-20 2.730E-20 7.616E-21 2.034E-21 5.196E-22 1.268E-22 2.952E-23
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00	1.000E+00 7.742E-01 5.025E-01 2.900E-01 1.475E-01 6.568E-02 2.547E-02 1.148E-02 4.774E-03 1.831E-03 6.464E-04 2.100E-04 6.273E-05 1.722E-05 4.342E-06 1.005E-06 2.134E-07 4.156E-08 7.425E-09 1.217E-09 1.831E-10 2.551E-11 3.418E-12 5.169E-13 1.267E-13 5.365E-14 2.801E-14 1.504E-14 7.967E-15 4.133E-15

	6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	2.097E-15 1.039E-15 5.034E-16 2.381E-16 1.100E-16 4.956E-17 2.179E-17 9.343E-18 3.905E-18 1.590E-18 6.307E-19
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 8.019E-01 5.591E-01 3.571E-01 2.078E-01 1.096E-01 5.220E-02 2.809E-02 1.424E-02 6.799E-03 3.054E-03 1.290E-03 5.120E-04 1.909E-04 6.680E-05 2.194E-05 6.759E-06 1.953E-06 5.290E-07 1.343E-07 3.197E-08 7.128E-09 1.490E-09 2.920E-10 5.389E-11 9.503E-12 1.694E-12 3.623E-13 1.189E-13 5.776E-14 3.280E-14 1.917E-14 1.114E-14 6.376E-15 3.590E-15 1.987E-15 1.081E-15 5.781E-16 3.037E-16 1.567E-16 7.937E-17
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.215E-01 6.002E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	4.091E-01 2.590E-01 1.517E-01 8.198E-02 4.915E-02 2.812E-02 1.534E-02 7.975E-03 3.949E-03 1.861E-03 8.347E-04 3.561E-04 1.444E-04 5.569E-05 2.040E-05 7.103E-06 2.349E-06 7.376E-07 2.200E-07 6.227E-08 1.674E-08 4.270E-09 1.035E-09 2.382E-10 5.229E-11 1.107E-11 2.351E-12 5.585E-13 1.793E-13 8.314E-14 4.769E-14 2.927E-14 1.813E-14 1.115E-14 6.772E-15 4.060E-15 2.401E-15 1.400E-15
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00	1.000E+00 8.364E-01 6.320E-01 4.508E-01 3.025E-01 1.904E-01 1.121E-01 7.234E-02 4.491E-02 2.680E-02 1.538E-02 8.472E-03 4.482E-03 2.275E-03 1.109E-03 5.180E-04 2.321E-04 9.970E-05

	4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	4.105E-05 1.620E-05 6.123E-06 2.218E-06 7.693E-07 2.556E-07 8.134E-08 2.478E-08 7.230E-09 2.020E-09 5.406E-10 1.388E-10 3.432E-11 8.283E-12 2.027E-12 5.535E-13 1.957E-13 9.457E-14 5.577E-14 3.546E-14 2.292E-14 1.477E-14 9.437E-15
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00	1.000E+00 8.482E-01 6.574E-01 4.850E-01 3.397E-01 2.254E-01 1.413E-01 9.617E-02 6.333E-02 4.034E-02 2.484E-02 1.478E-02 8.497E-03 4.717E-03 2.528E-03 1.307E-03 6.525E-04 3.141E-04 1.459E-04 6.533E-05 2.821E-05 1.174E-05 4.712E-06 1.822E-06 6.792E-07 2.439E-07 8.442E-08 2.815E-08 9.043E-09 2.799E-09 8.350E-10 2.402E-10 6.681E-11

	7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.807E-11 4.841E-12 1.345E-12 4.270E-13 1.740E-13 9.200E-14 5.693E-14 3.746E-14
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 8.578E-01 6.783E-01 5.139E-01 3.721E-01 2.570E-01 1.690E-01 1.198E-01 8.249E-02 5.520E-02 3.586E-02 2.262E-02 1.385E-02 8.221E-03 4.734E-03 2.643E-03 1.431E-03 7.505E-04 3.816E-04 1.879E-04 8.968E-05 4.145E-05 1.856E-05 8.044E-06 3.377E-06 1.372E-06 5.400E-07 2.057E-07 7.585E-08 2.707E-08 9.353E-09 3.128E-09 1.013E-09 3.176E-10 9.664E-11 2.864E-11 8.354E-12 2.464E-12 7.809E-13 2.931E-13 1.399E-13
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 8.659E-01 6.960E-01 5.386E-01 4.004E-01 2.856E-01

	1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.950E-01 1.427E-01 1.018E-01 7.080E-02 4.798E-02 3.168E-02 2.036E-02 1.274E-02 7.763E-03 4.602E-03 2.654E-03 1.489E-03 8.122E-04 4.309E-04 2.223E-04 1.115E-04 5.435E-05 2.575E-05 1.186E-05 5.308E-06 2.308E-06 9.754E-07 4.005E-07 1.597E-07 6.190E-08 2.330E-08 8.520E-09 3.027E-09 1.045E-09 3.506E-10 1.145E-10 3.650E-11 1.144E-11 3.596E-12 1.180E-12
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00	1.000E+00 8.728E-01 7.111E-01 5.600E-01 4.255E-01 3.115E-01 2.194E-01 1.647E-01 1.209E-01 8.674E-02 6.082E-02 4.165E-02 2.785E-02 1.819E-02 1.159E-02 7.208E-03 4.374E-03 2.589E-03 1.495E-03 8.420E-04 4.624E-04

	4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	2.476E-04 1.292E-04 6.577E-05 3.262E-05 1.577E-05 7.431E-06 3.412E-06 1.527E-06 6.657E-07 2.828E-07 1.171E-07 4.721E-08 1.855E-08 7.100E-09 2.648E-09 9.623E-10 3.409E-10 1.179E-10 3.988E-11 1.329E-11
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00	1.000E+00 8.788E-01 7.243E-01 5.789E-01 4.479E-01 3.351E-01 2.420E-01 1.856E-01 1.395E-01 1.027E-01 7.407E-02 5.228E-02 3.612E-02 2.442E-02 1.615E-02 1.045E-02 6.612E-03 4.091E-03 2.475E-03 1.463E-03 8.459E-04 4.779E-04 2.639E-04 1.424E-04 7.505E-05 3.865E-05 1.945E-05 9.560E-06 4.590E-06 2.153E-06 9.862E-07 4.412E-07 1.928E-07 8.227E-08 3.429E-08 1.395E-08

	8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	5.545E-09 2.152E-09 8.160E-10 3.023E-10 1.096E-10
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 8.840E-01 7.360E-01 5.957E-01 4.680E-01 3.566E-01 2.632E-01 2.055E-01 1.576E-01 1.186E-01 8.751E-02 6.336E-02 4.498E-02 3.131E-02 2.136E-02 1.429E-02 9.361E-03 6.009E-03 3.779E-03 2.328E-03 1.405E-03 8.300E-04 4.802E-04 2.721E-04 1.509E-04 8.193E-05 4.355E-05 2.266E-05 1.154E-05 5.752E-06 2.806E-06 1.340E-06 6.258E-07 2.861E-07 1.280E-07 5.603E-08 2.400E-08 1.006E-08 4.125E-09 1.656E-09 6.503E-10
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00	1.000E+00 8.886E-01 7.463E-01 6.107E-01 4.863E-01 3.764E-01 2.829E-01 2.244E-01 1.750E-01

	2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.341E-01 1.010E-01 7.471E-02 5.429E-02 3.873E-02 2.714E-02 1.866E-02 1.260E-02 8.345E-03 5.424E-03 3.459E-03 2.164E-03 1.328E-03 7.998E-04 4.722E-04 2.734E-04 1.553E-04 8.646E-05 4.720E-05 2.527E-05 1.326E-05 6.823E-06 3.441E-06 1.702E-06 8.247E-07 3.918E-07 1.824E-07 8.327E-08 3.725E-08 1.633E-08 7.019E-09 2.956E-09
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00	1.000E+00 8.928E-01 7.556E-01 6.242E-01 5.028E-01 3.946E-01 3.014E-01 2.423E-01 1.917E-01 1.493E-01 1.144E-01 8.620E-02 6.390E-02 4.658E-02 3.338E-02 2.352E-02 1.629E-02 1.108E-02 7.411E-03 4.870E-03 3.143E-03 1.993E-03 1.242E-03 7.597E-04

	5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	4.565E-04 2.694E-04 1.561E-04 8.881E-05 4.962E-05 2.722E-05 1.466E-05 7.752E-06 4.024E-06 2.050E-06 1.026E-06 5.036E-07 2.427E-07 1.148E-07 5.332E-08 2.430E-08 1.087E-08
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00	1.000E+00 8.965E-01 7.639E-01 6.365E-01 5.180E-01 4.115E-01 3.187E-01 2.592E-01 2.077E-01 1.640E-01 1.276E-01 9.772E-02 7.371E-02 5.474E-02 4.002E-02 2.879E-02 2.038E-02 1.420E-02 9.733E-03 6.563E-03 4.353E-03 2.840E-03 1.822E-03 1.150E-03 7.134E-04 4.352E-04 2.611E-04 1.540E-04 8.929E-05 5.090E-05 2.852E-05 1.571E-05 8.507E-06 4.527E-06 2.368E-06 1.218E-06 6.153E-07 3.056E-07 1.491E-07

	9.009E+00 9.235E+00	7.153E-08 3.372E-08
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 8.999E-01 7.716E-01 6.477E-01 5.320E-01 4.271E-01 3.349E-01 2.752E-01 2.230E-01 1.783E-01 1.405E-01 1.092E-01 8.364E-02 6.314E-02 4.696E-02 3.442E-02 2.485E-02 1.767E-02 1.238E-02 8.537E-03 5.799E-03 3.878E-03 2.554E-03 1.655E-03 1.056E-03 6.637E-04 4.104E-04 2.498E-04 1.496E-04 8.821E-05 5.118E-05 2.922E-05 1.642E-05 9.076E-06 4.938E-06 2.643E-06 1.392E-06 7.213E-07 3.677E-07 1.845E-07 9.102E-08
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00	1.000E+00 9.031E-01 7.785E-01 6.581E-01 5.449E-01 4.417E-01 3.502E-01 2.904E-01 2.377E-01 1.921E-01 1.532E-01 1.206E-01

	2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	9.362E-02 7.170E-02 5.416E-02 4.034E-02 2.963E-02 2.146E-02 1.532E-02 1.078E-02 7.480E-03 5.114E-03 3.445E-03 2.288E-03 1.497E-03 9.648E-04 6.128E-04 3.835E-04 2.364E-04 1.436E-04 8.590E-05 5.062E-05 2.938E-05 1.680E-05 9.461E-06 5.248E-06 2.867E-06 1.542E-06 8.172E-07 4.264E-07 2.191E-07
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00	1.000E+00 9.059E-01 7.849E-01 6.676E-01 5.569E-01 4.553E-01 3.646E-01 3.048E-01 2.518E-01 2.055E-01 1.656E-01 1.318E-01 1.036E-01 8.036E-02 6.154E-02 4.652E-02 3.470E-02 2.554E-02 1.855E-02 1.329E-02 9.392E-03 6.548E-03 4.503E-03 3.054E-03 2.043E-03 1.348E-03 8.766E-04

	6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	5.623E-04 3.556E-04 2.217E-04 1.363E-04 8.264E-05 4.938E-05 2.909E-05 1.690E-05 9.673E-06 5.459E-06 3.037E-06 1.665E-06 8.998E-07 4.793E-07
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 9.085E-01 7.908E-01 6.764E-01 5.680E-01 4.680E-01 3.782E-01 3.185E-01 2.652E-01 2.184E-01 1.777E-01 1.429E-01 1.135E-01 8.908E-02 6.907E-02 5.289E-02 4.000E-02 2.987E-02 2.203E-02 1.604E-02 1.153E-02 8.179E-03 5.729E-03 3.960E-03 2.702E-03 1.820E-03 1.209E-03 7.929E-04 5.131E-04 3.276E-04 2.064E-04 1.283E-04 7.871E-05 4.763E-05 2.843E-05 1.675E-05 9.729E-06 5.576E-06 3.153E-06 1.758E-06 9.674E-07

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 9.110E-01 7.963E-01 6.846E-01 5.784E-01 4.800E-01 3.910E-01 3.315E-01 2.781E-01 2.308E-01 1.894E-01 1.537E-01 1.233E-01 9.781E-02 7.669E-02 5.942E-02 4.550E-02 3.443E-02 2.574E-02 1.902E-02 1.388E-02 1.000E-02 7.123E-03 5.009E-03 3.480E-03 2.387E-03 1.617E-03 1.082E-03 7.147E-04 4.662E-04 3.003E-04 1.909E-04 1.199E-04 7.432E-05 4.548E-05 2.748E-05 1.639E-05 9.650E-06 5.609E-06 3.218E-06 1.823E-06
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00	1.000E+00 9.132E-01 8.014E-01 6.922E-01 5.881E-01 4.912E-01 4.031E-01 3.439E-01 2.905E-01 2.428E-01 2.008E-01 1.643E-01 1.330E-01 1.065E-01 8.437E-02

	3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	6.608E-02 5.117E-02 3.919E-02 2.967E-02 2.220E-02 1.643E-02 1.201E-02 8.683E-03 6.202E-03 4.379E-03 3.055E-03 2.106E-03 1.435E-03 9.656E-04 6.421E-04 4.219E-04 2.739E-04 1.757E-04 1.113E-04 6.966E-05 4.307E-05 2.631E-05 1.587E-05 9.458E-06 5.568E-06 3.237E-06
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00	1.000E+00 9.153E-01 8.062E-01 6.994E-01 5.973E-01 5.019E-01 4.147E-01 3.558E-01 3.023E-01 2.544E-01 2.119E-01 1.747E-01 1.426E-01 1.152E-01 9.207E-02 7.282E-02 5.698E-02 4.411E-02 3.378E-02 2.558E-02 1.917E-02 1.420E-02 1.040E-02 7.539E-03 5.401E-03 3.826E-03 2.680E-03 1.856E-03 1.271E-03 8.600E-04

	6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	5.754E-04 3.806E-04 2.488E-04 1.608E-04 1.027E-04 6.488E-05 4.049E-05 2.498E-05 1.523E-05 9.175E-06 5.464E-06
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 9.173E-01 8.107E-01 7.061E-01 6.059E-01 5.119E-01 4.256E-01 3.671E-01 3.137E-01 2.655E-01 2.226E-01 1.849E-01 1.520E-01 1.238E-01 9.978E-02 7.963E-02 6.290E-02 4.918E-02 3.805E-02 2.914E-02 2.208E-02 1.656E-02 1.228E-02 9.016E-03 6.547E-03 4.704E-03 3.343E-03 2.350E-03 1.634E-03 1.124E-03 7.646E-04 5.144E-04 3.423E-04 2.253E-04 1.467E-04 9.440E-05 6.009E-05 3.782E-05 2.354E-05 1.449E-05 8.821E-06
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.192E-01 8.148E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	7.124E-01 6.140E-01 5.214E-01 4.360E-01 3.778E-01 3.246E-01 2.763E-01 2.331E-01 1.948E-01 1.613E-01 1.323E-01 1.075E-01 8.647E-02 6.890E-02 5.437E-02 4.247E-02 3.285E-02 2.516E-02 1.907E-02 1.431E-02 1.063E-02 7.816E-03 5.688E-03 4.096E-03 2.920E-03 2.059E-03 1.438E-03 9.930E-04 6.787E-04 4.590E-04 3.072E-04 2.034E-04 1.332E-04 8.637E-05 5.539E-05 3.514E-05 2.206E-05 1.370E-05
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00	1.000E+00 9.209E-01 8.188E-01 7.184E-01 6.217E-01 5.304E-01 4.460E-01 3.882E-01 3.350E-01 2.867E-01 2.432E-01 2.045E-01 1.704E-01 1.407E-01 1.151E-01 9.334E-02 7.497E-02 5.965E-02

	4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	4.702E-02 3.671E-02 2.838E-02 2.173E-02 1.648E-02 1.238E-02 9.206E-03 6.779E-03 4.942E-03 3.568E-03 2.550E-03 1.804E-03 1.264E-03 8.764E-04 6.017E-04 4.089E-04 2.750E-04 1.831E-04 1.207E-04 7.873E-05 5.083E-05 3.249E-05 2.055E-05
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00	1.000E+00 9.225E-01 8.225E-01 7.240E-01 6.290E-01 5.390E-01 4.554E-01 3.981E-01 3.451E-01 2.967E-01 2.530E-01 2.139E-01 1.793E-01 1.490E-01 1.227E-01 1.002E-01 8.108E-02 6.502E-02 5.167E-02 4.069E-02 3.174E-02 2.454E-02 1.879E-02 1.426E-02 1.071E-02 7.976E-03 5.882E-03 4.296E-03 3.108E-03 2.227E-03 1.580E-03 1.111E-03 7.729E-04

	7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	5.327E-04 3.636E-04 2.458E-04 1.645E-04 1.090E-04 7.154E-05 4.648E-05 2.991E-05
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	1.000E+00 9.241E-01 8.260E-01 7.294E-01 6.359E-01 5.471E-01 4.645E-01 4.075E-01 3.548E-01 3.064E-01 2.625E-01 2.231E-01 1.880E-01 1.572E-01 1.303E-01 1.071E-01 8.722E-02 7.045E-02 5.641E-02 4.477E-02 3.522E-02 2.747E-02 2.122E-02 1.625E-02 1.234E-02 9.277E-03 6.914E-03 5.105E-03 3.735E-03 2.707E-03 1.944E-03 1.384E-03 9.753E-04 6.811E-04 4.712E-04 3.229E-04 2.192E-04 1.474E-04 9.822E-05 6.481E-05 4.236E-05
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.256E-01 8.294E-01 7.344E-01 6.424E-01 5.549E-01

	1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00 4.927E+00 5.154E+00 5.380E+00 5.607E+00 5.834E+00 6.061E+00 6.288E+00 6.514E+00 6.741E+00 6.968E+00 7.195E+00 7.421E+00 7.648E+00 7.875E+00 8.102E+00 8.328E+00 8.555E+00 8.782E+00 9.009E+00 9.235E+00	4.732E-01 4.166E-01 3.641E-01 3.158E-01 2.718E-01 2.321E-01 1.966E-01 1.652E-01 1.377E-01 1.139E-01 9.338E-02 7.593E-02 6.123E-02 4.896E-02 3.882E-02 3.051E-02 2.378E-02 1.837E-02 1.407E-02 1.068E-02 8.038E-03 5.995E-03 4.433E-03 3.248E-03 2.359E-03 1.698E-03 1.211E-03 8.562E-04 5.998E-04 4.164E-04 2.865E-04 1.953E-04 1.319E-04 8.831E-05 5.857E-05
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.752E+00 1.979E+00 2.206E+00 2.433E+00 2.659E+00 2.886E+00 3.113E+00 3.340E+00 3.566E+00 3.793E+00 4.020E+00 4.247E+00 4.473E+00 4.700E+00	1.000E+00 9.275E-01 8.337E-01 7.411E-01 6.511E-01 5.652E-01 4.847E-01 4.288E-01 3.766E-01 3.284E-01 2.843E-01 2.442E-01 2.083E-01 1.763E-01 1.480E-01 1.234E-01 1.020E-01 8.366E-02 6.808E-02 5.496E-02 4.401E-02

	4.927E+00	3.496E-02
	5.154E+00	2.754E-02
	5.380E+00	2.152E-02
	5.607E+00	1.667E-02
	5.834E+00	1.281E-02
	6.061E+00	9.763E-03
	6.288E+00	7.378E-03
	6.514E+00	5.529E-03
	6.741E+00	4.108E-03
	6.968E+00	3.027E-03
	7.195E+00	2.211E-03
	7.421E+00	1.601E-03
	7.648E+00	1.150E-03
	7.875E+00	8.188E-04
	8.102E+00	5.780E-04
	8.328E+00	4.044E-04
	8.555E+00	2.806E-04
	8.782E+00	1.930E-04
	9.009E+00	1.316E-04
	9.235E+00	8.893E-05

NOTICE

Although this program has been tested and experience would indicate that it is accurate within the limits given by the assumptions of the theory used, we make no warranty as to workability of this software or any other licensed material. No warranties either expressed or implied (including warranties of fitness) shall apply. No responsibility is assumed for any errors, mistakes or misrepresentations that may occur from the use of this computer program. The user accepts full responsibility for assessing the validity and applicability of the results obtained with this program for any specific case.

SENSITIVITY RUN #13
ALL LAYERS
VERTICAL DARCY VELOCITY = 3.08E-03 m/yr

Increase by Factor of 10

POLLUTEv7

Version 7.13

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Site 2 North Expansion - Sens13

THE DARCY VELOCITY (Flux) THROUGH THE LAYERS $V_a = 0.00308$ m/year

Layer Properties

Layer	Thickness	Number of Sublayers	Coefficient of Hydrodynamic Dispersion	Matrix Porosity	Distribution Coefficient	Dry Density
60 mil HDPE Liner	0.0015 m	1	3E-5 m ² /a	1	0 m ³ /kg	940 kg/m ³
Recompacted Cohesive Soil Liner	1.524 m	5	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³
Wadsworth Formation	10.27 m	34	0.019 m ² /a	0.25	0 m ³ /kg	1896.5 kg/m ³

Boundary Conditions

Constant Concentration

Source Concentration = 1 mg/L

Infinite Thickness Bottom Boundary

Laplace Transform Parameters

TAU = 7 N = 20 SIG = 0 RNU = 2

Calculated Concentrations at Selected Times and Depths

Time year	Depth m	Concentration mg/L
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5	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 6.892E-01 3.128E-01 9.858E-02 2.083E-02 2.879E-03 2.563E-04 1.493E-05 5.539E-07 1.301E-08 1.937E-10 2.163E-12 1.223E-13 3.014E-14 7.204E-15 1.528E-15 2.860E-16 4.704E-17 6.766E-18 8.464E-19 9.155E-20 8.510E-21 6.750E-22 4.536E-23 2.565E-24 1.214E-25 4.857E-27 1.810E-28 9.493E-30 1.022E-30 1.477E-31 2.104E-32 2.781E-33 3.378E-34 3.759E-35 3.823E-36 3.543E-37 2.985E-38 2.279E-39 1.574E-40 9.830E-42
10	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 7.788E-01 4.843E-01 2.523E-01 1.085E-01 3.805E-02 1.080E-02 2.501E-03 4.652E-04 6.930E-05 8.242E-06 7.809E-07 5.884E-08 3.523E-09 1.685E-10

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.995E-12 5.103E-13 1.427E-13 5.589E-14 2.125E-14 7.619E-15 2.570E-15 8.139E-16 2.418E-16 6.722E-17 1.747E-17 4.233E-18 9.550E-19 2.001E-19 3.886E-20 6.976E-21 1.155E-21 1.759E-22 2.457E-23 3.142E-24 3.674E-25 3.943E-26 3.962E-27 4.014E-28 4.953E-29 8.988E-30
15	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 8.241E-01 5.809E-01 3.648E-01 2.021E-01 9.816E-02 4.154E-02 1.540E-02 4.949E-03 1.375E-03 3.297E-04 6.810E-05 1.210E-05 1.847E-06 2.420E-07 2.720E-08 2.622E-09 2.180E-10 1.637E-11 1.524E-12 3.603E-13 1.585E-13 7.532E-14 3.482E-14 1.548E-14 6.611E-15 2.708E-15 1.064E-15 4.001E-16 1.440E-16

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.955E-17 1.628E-17 5.105E-18 1.525E-18 4.338E-19 1.173E-19 3.010E-20 7.323E-21 1.687E-21 3.675E-22 7.559E-23
20	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 8.526E-01 6.447E-01 4.476E-01 2.835E-01 1.629E-01 8.461E-02 3.987E-02 1.691E-02 6.442E-03 2.201E-03 6.730E-04 1.841E-04 4.499E-05 9.817E-06 1.911E-06 3.316E-07 5.129E-08 7.069E-09 8.697E-10 9.661E-11 1.041E-11 1.511E-12 4.718E-13 2.330E-13 1.241E-13 6.513E-14 3.323E-14 1.645E-14 7.901E-15 3.678E-15 1.658E-15 7.239E-16 3.058E-16 1.249E-16 4.932E-17 1.880E-17 6.919E-18 2.455E-18 8.395E-19 2.764E-19
25	0.000E+00 1.500E-03 3.063E-01	1.000E+00 8.726E-01 6.907E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.111E-01 3.518E-01 2.244E-01 1.321E-01 7.207E-02 3.619E-02 1.669E-02 7.063E-03 2.738E-03 9.719E-04 3.155E-04 9.359E-05 2.536E-05 6.273E-06 1.416E-06 2.915E-07 5.472E-08 9.368E-09 1.464E-09 2.101E-10 2.863E-11 4.307E-12 1.052E-12 4.667E-13 2.608E-13 1.500E-13 8.504E-14 4.713E-14 2.550E-14 1.346E-14 6.933E-15 3.482E-15 1.705E-15 8.130E-16 3.776E-16 1.707E-16 7.512E-17 3.214E-17
30	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 8.877E-01 7.258E-01 5.615E-01 4.093E-01 2.802E-01 1.797E-01 1.082E-01 6.089E-02 3.195E-02 1.561E-02 7.096E-03 2.999E-03 1.177E-03 4.290E-04 1.450E-04 4.547E-05 1.321E-05

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.558E-06 8.875E-07 2.050E-07 4.385E-08 8.684E-09 1.594E-09 2.727E-10 4.452E-11 7.653E-12 1.826E-12 7.496E-13 4.217E-13 2.559E-13 1.553E-13 9.269E-14 5.428E-14 3.115E-14 1.752E-14 9.650E-15 5.206E-15 2.749E-15 1.421E-15 7.182E-16
35	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 8.995E-01 7.536E-01 6.025E-01 4.581E-01 3.304E-01 2.254E-01 1.458E-01 8.906E-02 5.126E-02 2.778E-02 1.416E-02 6.782E-03 3.051E-03 1.289E-03 5.105E-04 1.896E-04 6.605E-05 2.155E-05 6.589E-06 1.886E-06 5.057E-07 1.269E-07 2.982E-08 6.559E-09 1.353E-09 2.630E-10 4.930E-11 9.689E-12 2.491E-12 1.026E-12 5.839E-13 3.673E-13

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.337E-13 1.471E-13 9.110E-14 5.548E-14 3.321E-14 1.954E-14 1.129E-14 6.407E-15
40	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.090E-01 7.764E-01 6.367E-01 5.000E-01 3.751E-01 2.683E-01 1.833E-01 1.191E-01 7.353E-02 4.308E-02 2.394E-02 1.260E-02 6.282E-03 2.964E-03 1.323E-03 5.585E-04 2.228E-04 8.402E-05 2.993E-05 1.007E-05 3.199E-06 9.593E-07 2.716E-07 7.258E-08 1.831E-08 4.360E-09 9.822E-10 2.108E-10 4.418E-11 9.840E-12 2.834E-12 1.241E-12 7.280E-13 4.723E-13 3.115E-13 2.039E-13 1.318E-13 8.390E-14 5.263E-14 3.251E-14
45	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.169E-01 7.953E-01 6.657E-01 5.364E-01 4.152E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	3.082E-01 2.197E-01 1.499E-01 9.776E-02 6.089E-02 3.619E-02 2.051E-02 1.108E-02 5.700E-03 2.792E-03 1.302E-03 5.776E-04 2.437E-04 9.780E-05 3.731E-05 1.353E-05 4.662E-06 1.526E-06 4.747E-07 1.403E-07 3.937E-08 1.050E-08 2.662E-09 6.433E-10 1.496E-10 3.455E-11 8.698E-12 2.865E-12 1.374E-12 8.430E-13 5.637E-13 3.828E-13 2.585E-13 1.726E-13 1.137E-13
50	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.236E-01 8.114E-01 6.907E-01 5.683E-01 4.512E-01 3.451E-01 2.547E-01 1.807E-01 1.232E-01 8.057E-02 5.055E-02 3.040E-02 1.751E-02 9.657E-03 5.098E-03 2.574E-03 1.243E-03 5.742E-04 2.535E-04 1.069E-04

	6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	4.311E-05 1.660E-05 6.107E-06 2.146E-06 7.198E-07 2.306E-07 7.052E-08 2.059E-08 5.744E-09 1.532E-09 3.926E-10 9.792E-11 2.479E-11 7.099E-12 2.709E-12 1.439E-12 9.274E-13 6.381E-13 4.442E-13 3.076E-13
55	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01	1.000E+00 9.294E-01 8.253E-01 7.124E-01 5.965E-01 4.836E-01 3.792E-01 2.879E-01 2.110E-01 1.491E-01 1.016E-01 6.663E-02 4.206E-02 2.554E-02 1.491E-02 8.369E-03 4.512E-03 2.337E-03 1.162E-03 5.547E-04 2.541E-04 1.117E-04 4.714E-05 1.907E-05 7.404E-06 2.756E-06 9.838E-07 3.367E-07 1.105E-07 3.477E-08 1.049E-08 3.038E-09 8.461E-10 2.282E-10 6.082E-11 1.697E-11

	1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	5.597E-12 2.489E-12 1.459E-12 9.847E-13 6.954E-13
60	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.343E-01 8.374E-01 7.314E-01 6.215E-01 5.130E-01 4.107E-01 3.193E-01 2.405E-01 1.752E-01 1.235E-01 8.405E-02 5.526E-02 3.507E-02 2.147E-02 1.268E-02 7.222E-03 3.964E-03 2.097E-03 1.068E-03 5.244E-04 2.479E-04 1.128E-04 4.944E-05 2.085E-05 8.466E-06 3.308E-06 1.244E-06 4.499E-07 1.566E-07 5.245E-08 1.690E-08 5.244E-09 1.568E-09 4.538E-10 1.285E-10 3.673E-11 1.145E-11 4.420E-12 2.278E-12 1.453E-12
65	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00	1.000E+00 9.387E-01 8.481E-01 7.484E-01 6.440E-01 5.396E-01 4.398E-01 3.490E-01 2.689E-01

	2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	2.011E-01 1.458E-01 1.025E-01 6.973E-02 4.594E-02 2.929E-02 1.806E-02 1.077E-02 6.213E-03 3.462E-03 1.865E-03 9.702E-04 4.876E-04 2.367E-04 1.109E-04 5.021E-05 2.194E-05 9.254E-06 3.767E-06 1.480E-06 5.613E-07 2.054E-07 7.253E-08 2.472E-08 8.131E-09 2.584E-09 7.955E-10 2.387E-10 7.117E-11 2.210E-11 7.868E-12 3.584E-12
70	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00	1.000E+00 9.426E-01 8.576E-01 7.635E-01 6.642E-01 5.640E-01 4.667E-01 3.769E-01 2.963E-01 2.266E-01 1.684E-01 1.216E-01 8.522E-02 5.798E-02 3.827E-02 2.450E-02 1.521E-02 9.147E-03 5.332E-03 3.011E-03 1.647E-03 8.725E-04 4.476E-04 2.223E-04

	6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.069E-04 4.973E-05 2.240E-05 9.763E-06 4.118E-06 1.680E-06 6.635E-07 2.534E-07 9.366E-08 3.349E-08 1.159E-08 3.882E-09 1.261E-09 3.991E-10 1.245E-10 3.947E-11 1.360E-11
75	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01	1.000E+00 9.461E-01 8.660E-01 7.771E-01 6.826E-01 5.862E-01 4.917E-01 4.032E-01 3.225E-01 2.514E-01 1.909E-01 1.411E-01 1.015E-01 7.103E-02 4.832E-02 3.194E-02 2.052E-02 1.281E-02 7.762E-03 4.567E-03 2.609E-03 1.447E-03 7.786E-04 4.066E-04 2.060E-04 1.012E-04 4.827E-05 2.232E-05 1.001E-05 4.354E-06 1.836E-06 7.510E-07 2.978E-07 1.145E-07 4.268E-08 1.543E-08 5.412E-09 1.844E-09 6.119E-10

	1.149E+01 1.180E+01	1.995E-10 6.520E-11
80	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.492E-01 8.737E-01 7.894E-01 6.993E-01 6.067E-01 5.150E-01 4.280E-01 3.476E-01 2.756E-01 2.133E-01 1.609E-01 1.184E-01 8.490E-02 5.930E-02 4.033E-02 2.671E-02 1.721E-02 1.079E-02 6.585E-03 3.907E-03 2.255E-03 1.266E-03 6.905E-04 3.663E-04 1.889E-04 9.464E-05 4.609E-05 2.181E-05 1.003E-05 4.483E-06 1.946E-06 8.207E-07 3.363E-07 1.339E-07 5.176E-08 1.944E-08 7.100E-09 2.522E-09 8.734E-10 2.966E-10
85	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00	1.000E+00 9.520E-01 8.806E-01 8.006E-01 7.146E-01 6.256E-01 5.366E-01 4.513E-01 3.715E-01 2.990E-01 2.353E-01 1.808E-01

	3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.357E-01 9.945E-02 7.110E-02 4.958E-02 3.372E-02 2.236E-02 1.445E-02 9.101E-03 5.585E-03 3.339E-03 1.945E-03 1.103E-03 6.093E-04 3.277E-04 1.716E-04 8.749E-05 4.342E-05 2.098E-05 9.863E-06 4.514E-06 2.010E-06 8.713E-07 3.675E-07 1.508E-07 6.024E-08 2.341E-08 8.859E-09 3.266E-09 1.175E-09
90	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00	1.000E+00 9.546E-01 8.869E-01 8.108E-01 7.287E-01 6.430E-01 5.567E-01 4.733E-01 3.943E-01 3.217E-01 2.569E-01 2.007E-01 1.533E-01 1.145E-01 8.360E-02 5.961E-02 4.152E-02 2.823E-02 1.874E-02 1.214E-02 7.679E-03 4.738E-03 2.852E-03 1.674E-03 9.587E-04 5.354E-04 2.916E-04

	7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.548E-04 8.015E-05 4.045E-05 1.990E-05 9.545E-06 4.462E-06 2.033E-06 9.028E-07 3.907E-07 1.648E-07 6.775E-08 2.714E-08 1.060E-08 4.040E-09
95	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.569E-01 8.926E-01 8.202E-01 7.416E-01 6.592E-01 5.756E-01 4.940E-01 4.160E-01 3.435E-01 2.780E-01 2.204E-01 1.711E-01 1.300E-01 9.668E-02 7.033E-02 5.004E-02 3.481E-02 2.367E-02 1.573E-02 1.022E-02 6.483E-03 4.019E-03 2.433E-03 1.439E-03 8.312E-04 4.688E-04 2.582E-04 1.388E-04 7.285E-05 3.733E-05 1.867E-05 9.114E-06 4.343E-06 2.020E-06 9.166E-07 4.060E-07 1.755E-07 7.402E-08 3.047E-08 1.225E-08

100	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.590E-01 8.979E-01 8.288E-01 7.536E-01 6.743E-01 5.932E-01 5.135E-01 4.367E-01 3.645E-01 2.986E-01 2.398E-01 1.889E-01 1.458E-01 1.102E-01 8.165E-02 5.922E-02 4.204E-02 2.921E-02 1.986E-02 1.322E-02 8.601E-03 5.476E-03 3.409E-03 2.076E-03 1.236E-03 7.192E-04 4.093E-04 2.277E-04 1.238E-04 6.579E-05 3.417E-05 1.735E-05 8.605E-06 4.171E-06 1.976E-06 9.146E-07 4.136E-07 1.828E-07 7.892E-08 3.330E-08
105	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00	1.000E+00 9.610E-01 9.028E-01 8.368E-01 7.647E-01 6.883E-01 6.098E-01 5.320E-01 4.564E-01 3.847E-01 3.186E-01 2.590E-01 2.067E-01 1.618E-01 1.242E-01

	4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	9.349E-02 6.899E-02 4.989E-02 3.535E-02 2.454E-02 1.669E-02 1.111E-02 7.247E-03 4.627E-03 2.892E-03 1.770E-03 1.060E-03 6.213E-04 3.564E-04 2.001E-04 1.099E-04 5.908E-05 3.107E-05 1.598E-05 8.046E-06 3.962E-06 1.908E-06 8.991E-07 4.144E-07 1.868E-07 8.239E-08
110	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00	1.000E+00 9.628E-01 9.073E-01 8.442E-01 7.750E-01 7.014E-01 6.253E-01 5.495E-01 4.752E-01 4.042E-01 3.380E-01 2.778E-01 2.243E-01 1.779E-01 1.384E-01 1.058E-01 7.930E-02 5.832E-02 4.207E-02 2.976E-02 2.064E-02 1.403E-02 9.354E-03 6.111E-03 3.912E-03 2.454E-03 1.509E-03 9.085E-04 5.360E-04 3.098E-04

	8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.754E-04 9.723E-05 5.280E-05 2.808E-05 1.463E-05 7.460E-06 3.726E-06 1.822E-06 8.727E-07 4.092E-07 1.879E-07
115	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.645E-01 9.114E-01 8.511E-01 7.846E-01 7.136E-01 6.399E-01 5.660E-01 4.931E-01 4.229E-01 3.569E-01 2.963E-01 2.418E-01 1.940E-01 1.529E-01 1.184E-01 9.006E-02 6.726E-02 4.932E-02 3.549E-02 2.507E-02 1.737E-02 1.181E-02 7.880E-03 5.156E-03 3.309E-03 2.083E-03 1.286E-03 7.782E-04 4.618E-04 2.687E-04 1.533E-04 8.572E-05 4.699E-05 2.525E-05 1.330E-05 6.867E-06 3.475E-06 1.723E-06 8.376E-07 3.990E-07
120	0.000E+00 1.500E-03 3.063E-01	1.000E+00 9.661E-01 9.153E-01

	6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	8.574E-01 7.936E-01 7.251E-01 6.537E-01 5.817E-01 5.102E-01 4.409E-01 3.752E-01 3.143E-01 2.591E-01 2.101E-01 1.675E-01 1.314E-01 1.012E-01 7.668E-02 5.706E-02 4.172E-02 2.996E-02 2.113E-02 1.463E-02 9.951E-03 6.643E-03 4.353E-03 2.800E-03 1.768E-03 1.096E-03 6.662E-04 3.975E-04 2.327E-04 1.337E-04 7.536E-05 4.167E-05 2.261E-05 1.203E-05 6.281E-06 3.216E-06 1.616E-06 7.961E-07
125	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00	1.000E+00 9.675E-01 9.189E-01 8.634E-01 8.020E-01 7.359E-01 6.667E-01 5.965E-01 5.265E-01 4.581E-01 3.928E-01 3.319E-01 2.761E-01 2.261E-01 1.822E-01 1.445E-01 1.128E-01 8.652E-02

	5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	6.528E-02 4.842E-02 3.531E-02 2.531E-02 1.782E-02 1.234E-02 8.388E-03 5.604E-03 3.678E-03 2.371E-03 1.501E-03 9.334E-04 5.700E-04 3.418E-04 2.013E-04 1.164E-04 6.608E-05 3.684E-05 2.016E-05 1.083E-05 5.713E-06 2.958E-06 1.503E-06
130	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00	1.000E+00 9.689E-01 9.223E-01 8.690E-01 8.099E-01 7.461E-01 6.789E-01 6.106E-01 5.420E-01 4.747E-01 4.100E-01 3.490E-01 2.928E-01 2.420E-01 1.970E-01 1.579E-01 1.246E-01 9.673E-02 7.391E-02 5.557E-02 4.110E-02 2.989E-02 2.139E-02 1.504E-02 1.041E-02 7.076E-03 4.730E-03 3.108E-03 2.008E-03 1.275E-03 7.952E-04 4.875E-04 2.937E-04

	9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.739E-04 1.012E-04 5.782E-05 3.247E-05 1.791E-05 9.710E-06 5.170E-06 2.705E-06
135	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	1.000E+00 9.702E-01 9.254E-01 8.742E-01 8.173E-01 7.557E-01 6.906E-01 6.240E-01 5.569E-01 4.906E-01 4.265E-01 3.657E-01 3.092E-01 2.577E-01 2.117E-01 1.714E-01 1.366E-01 1.073E-01 8.294E-02 6.313E-02 4.730E-02 3.488E-02 2.532E-02 1.808E-02 1.271E-02 8.783E-03 5.973E-03 3.995E-03 2.629E-03 1.701E-03 1.082E-03 6.774E-04 4.169E-04 2.523E-04 1.501E-04 8.780E-05 5.050E-05 2.855E-05 1.587E-05 8.673E-06 4.659E-06
140	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00	1.000E+00 9.714E-01 9.284E-01 8.792E-01 8.243E-01 7.647E-01

	1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00 6.056E+00 6.358E+00 6.660E+00 6.963E+00 7.265E+00 7.567E+00 7.869E+00 8.171E+00 8.473E+00 8.775E+00 9.077E+00 9.379E+00 9.681E+00 9.983E+00 1.029E+01 1.059E+01 1.089E+01 1.119E+01 1.149E+01 1.180E+01	7.016E-01 6.368E-01 5.711E-01 5.059E-01 4.425E-01 3.820E-01 3.253E-01 2.733E-01 2.264E-01 1.849E-01 1.489E-01 1.181E-01 9.231E-02 7.108E-02 5.391E-02 4.027E-02 2.962E-02 2.145E-02 1.529E-02 1.074E-02 7.418E-03 5.045E-03 3.376E-03 2.224E-03 1.442E-03 9.195E-04 5.771E-04 3.564E-04 2.165E-04 1.294E-04 7.610E-05 4.402E-05 2.505E-05 1.402E-05 7.722E-06
147	0.000E+00 1.500E-03 3.063E-01 6.111E-01 9.159E-01 1.221E+00 1.525E+00 1.828E+00 2.130E+00 2.432E+00 2.734E+00 3.036E+00 3.338E+00 3.640E+00 3.942E+00 4.244E+00 4.546E+00 4.848E+00 5.150E+00 5.452E+00 5.754E+00	1.000E+00 9.729E-01 9.323E-01 8.856E-01 8.334E-01 7.765E-01 7.160E-01 6.536E-01 5.900E-01 5.264E-01 4.640E-01 4.040E-01 3.473E-01 2.947E-01 2.468E-01 2.040E-01 1.662E-01 1.336E-01 1.059E-01 8.279E-02 6.378E-02

	6.056E+00	4.843E-02
	6.358E+00	3.624E-02
	6.660E+00	2.672E-02
	6.963E+00	1.942E-02
	7.265E+00	1.390E-02
	7.567E+00	9.802E-03
	7.869E+00	6.809E-03
	8.171E+00	4.659E-03
	8.473E+00	3.140E-03
	8.775E+00	2.084E-03
	9.077E+00	1.362E-03
	9.379E+00	8.768E-04
	9.681E+00	5.557E-04
	9.983E+00	3.469E-04
	1.029E+01	2.131E-04
	1.059E+01	1.290E-04
	1.089E+01	7.682E-05
	1.119E+01	4.506E-05
	1.149E+01	2.601E-05
	1.180E+01	1.479E-05

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