

Table S13

ID	Indian WWTP Downstream 1	Indian WWTP Downstream 2	Indian WWTP Downstream 3	Indian WWTP Discharge site	Indian WWTP Upstream 1	Indian WWTP Upstream 2	Swedish WWTP Upstream	Swedish WWTP Downstream	Total	Gene/Element
ARGENE400003	113	94	47	32	4	3	0	1	294	ISCR2 transposase ^a
ARGENE100006	47	21	23	5	4	5	1	0	106	intI1
ARGENE302403	0	38	5	15	1	0	0	0	59	ISVsa3 (IS91) ^a
ARGENE301609	1	1	2	6	5	2	0	0	17	ISSod9 (Tn3)
ARGENE301612	4	2	2	2	2	1	0	1	14	ISSod4 (IS256)
ARGENE301864	3	3	0	2	1	1	0	0	10	ISXax1 (IS256)
ARGENE300568	2	2	1	2	0	1	1	0	9	ISStma11 (ISL3)
ARGENE302383	1	2	0	4	0	0	0	0	7	ISSba16 (IS30)
ARGENE301407	0	1	1	0	1	4	0	0	7	ISCARN40 (IS256)
ARGENE300983	1	0	2	2	0	2	0	0	7	IS1071 (Tn3)
ARGENE300971	0	1	0	3	0	2	0	0	6	ISEcp1 (IS1380)
ARGENE301785	0	0	0	1	1	4	0	0	6	IS3000 (Tn3)
ARGENE100009	0	0	2	1	0	2	0	0	5	Unspecified integrase
ARGENE301280	0	0	0	0	0	0	1	4	5	ISAzoz18 (IS3)
ARGENE301441	0	1	0	0	0	2	1	1	5	ISArsp6 (Tn3)
ARGENE300818	1	1	1	1	0	0	0	0	4	IS6100 (IS6)
ARGENE300748	1	1	0	0	0	2	0	0	4	ISEncal (IS1380)
ARGENE302333	1	0	0	1	0	1	0	1	4	ISSsp5 (IS21)
ARGENE300310	2	1	1	0	0	0	0	0	4	IS26 (IS6)
ARGENE300494	0	0	0	0	0	1	0	2	3	ISAzvi2 (IS110)
ARGENE301511	1	0	0	0	0	0	0	2	3	IS1086 (IS30)
ARGENE301199	1	2	0	0	0	0	0	0	3	ISMsi3 (IS3)
ARGENE301178	0	2	0	1	0	0	0	0	3	ISMasp7 (IS1380)
ARGENE300023	1	0	0	0	1	1	0	0	3	ISThsp5 (IS21)
ARGENE301897	1	0	0	1	0	1	0	0	3	IS1247 (IS1380)
ARGENE300311	0	0	0	0	1	0	0	2	3	ISMex28 (IS5)
ARGENE301045	0	1	0	1	1	0	0	0	3	ISCARN27 (IS256)
ARGENE302561	0	0	0	3	0	0	0	0	3	ISPpu12 (ISL3)
ARGENE301455	0	0	0	0	0	0	0	3	3	ISAzoz28 (IS110)
ARGENE302158	3	0	0	0	0	0	0	0	3	ISSse3 (IS3)
ARGENE301980	1	0	0	0	0	1	0	1	3	ISCARN70 (IS4)
ARGENE301675	0	0	0	2	0	1	0	0	3	IS1419 (IS481)
ARGENE301721	0	0	0	0	0	1	1	0	2	ISPps1 (IS91)
ARGENE300954	0	0	0	0	0	0	1	1	2	ISXau2 (IS3)
ARGENE302116	1	0	0	0	0	0	1	0	2	ISPpu7 (IS21)
ARGENE300390	0	0	0	1	1	0	0	0	2	IS881 (IS5)
ARGENE300394	0	0	0	1	0	1	0	0	2	IS5 (IS5)
ARGENE301282	0	0	0	0	0	0	1	1	2	ISAzoz10 (IS3)
ARGENE301625	0	0	1	0	0	0	0	1	2	ISMch1 (IS3)

ARGENE302128	1	0	0	0	0	1	0	0	2	ISXac3 (IS3)
ARGENE301344	0	0	0	1	1	0	0	0	2	ISCte3 (IS3)
ARGENE302286	0	0	0	0	0	0	0	2	2	ISAz09 (IS630)
ARGENE301639	0	0	1	0	0	0	0	1	2	ISBmu3 (IS21)
ARGENE301084	0	0	0	0	0	0	1	1	2	ISMdi21 (IS5)
ARGENE300823	0	0	0	1	0	1	0	0	2	ISKpn10 (IS3)
ARGENE302507	0	0	0	0	0	1	0	1	2	ISPosp7 (IS1380)
ARGENE300981	0	1	0	0	0	0	0	1	2	ISDar2 (IS4)
ARGENE300036	0	0	1	0	0	1	0	0	2	ISllo12 (IS3)
ARGENE301619	1	0	0	0	1	0	0	0	2	ISEca11 (IS3)
ARGENE301767	0	0	0	0	1	0	0	1	2	ISSpma1 (IS3)
ARGENE302515	0	0	0	0	0	1	0	1	2	ISNeu4 (IS3)
ARGENE300020	1	0	0	0	0	1	0	0	2	ISThsp2 (IS21)
ARGENE300599	0	0	0	1	0	0	0	1	2	ISPre1 (IS5)
ARGENE300597	0	0	0	0	0	0	0	2	2	ISPre3 (IS66)
ARGENE300689	2	0	0	0	0	0	0	0	2	IS1541C (IS200/IS605)
ARGENE301086	0	0	0	0	1	1	0	0	2	ISMdi25 (IS30)
ARGENE300716	1	0	0	0	0	0	0	1	2	ISGdi8 (IS256)
ARGENE302327	0	0	1	0	0	0	0	1	2	ISPpu22 (IS3)
ARGENE300161	0	0	0	2	0	0	0	0	2	ISAd4 (IS3)
ARGENE301965	1	0	0	0	0	1	0	0	2	ISPme1 (IS1380)
ARGENE302201	0	0	0	0	0	1	0	1	2	ISApr6 (IS66)
ARGENE302334	0	0	1	0	0	0	0	1	2	ISSsp2 (IS3)
ARGENE302332	1	0	1	0	0	0	0	0	2	ISSsp4 (IS21)
ARGENE302537	1	0	0	0	0	1	0	0	2	ISEli1 (IS3)
ARGENE300777	0	0	0	0	0	0	1	1	2	ISPst3 (IS21)
ARGENE301956	1	0	0	0	0	1	0	0	2	ISPa29 (IS110)
ARGENE300797	0	0	0	0	0	2	0	0	2	ISUnCu5 (IS4)
ARGENE300795	0	0	0	0	1	1	0	0	2	ISUnCu3 (IS21)
ARGENE301048	0	0	0	0	0	0	0	2	2	ISCARN22 (IS66)
ARGENE301122	0	1	0	0	0	1	0	0	2	ISDde1 (IS5)
ARGENE300947	0	0	0	0	2	0	0	0	2	ISAzsp1 (IS3)
ARGENE300551	0	0	0	2	0	0	0	0	2	ISGdi17 (IS21)
ARGENE300883	0	1	0	0	0	0	0	1	2	ISCARN10 (IS200/IS605)
ARGENE302141	0	0	0	1	0	0	0	1	2	ISRso16 (IS3)
ARGENE302143	0	0	0	0	0	0	0	2	2	ISRso11 (IS3)
ARGENE302562	1	0	0	0	0	0	0	1	2	ISPpu19 (IS66)
ARGENE302028	0	0	0	0	0	1	1	0	2	ISCARN97 (IS110)
ARGENE301914	0	0	0	0	0	2	0	0	2	IS53 (IS21)
ARGENE301714	0	0	0	0	0	0	0	2	2	ISXo7 (IS630)
ARGENE301717	0	0	0	0	2	0	0	0	2	ISPPa2 (IS5)
ARGENE301712	0	0	0	1	1	0	0	0	2	ISPPa5 (IS66)

ARGENE301927	1	1	0	0	0	0	0	2	ISRme4 (IS21)
ARGENE301279	0	0	0	1	0	1	0	2	IS4351 (IS30)
ARGENE301493	0	0	1	0	0	1	0	2	ISMex39 (IS21)
ARGENE301933	0	1	0	0	0	1	0	2	ISBthe1 (IS4)
ARGENE300289	0	1	0	0	0	0	1	2	ISAZo16 (IS21)
ARGENE300411	1	0	0	1	0	0	0	2	ISMca3 (IS3)
ARGENE301449	1	0	0	0	1	0	0	2	ISAZo26 (IS91)
ARGENE302438	1	0	0	0	1	0	0	2	ISVsp19 (IS1380)
ARGENE300253	0	0	1	1	0	0	0	2	ISRme10 (IS30)
ARGENE300671	0	0	0	0	0	0	0	2	ISNieu3 (IS3)
ARGENE100008	0	0	0	1	0	0	0	1	intl2
ARGENE300920	0	0	0	0	0	1	0	1	ISDha10 (IS110)
ARGENE302426	0	0	0	0	0	1	0	1	ISAli4 (IS3)
ARGENE302421	0	1	0	0	0	0	0	1	ISAli2 (IS630)
ARGENE300245	1	0	0	0	0	0	0	1	IS1491 (IS21)
ARGENE300391	0	1	0	0	0	0	0	1	IS883 (IS66)
ARGENE300669	0	0	0	0	0	0	0	1	ISThsp19 (IS21)
ARGENE300663	0	0	0	0	0	1	0	1	ISThsp10 (IS21)
ARGENE301281	0	1	0	0	0	0	0	1	ISAZo19 (IS66)
ARGENE301287	0	0	0	1	0	0	0	1	ISAZo15 (IS66)
ARGENE301285	0	0	0	0	0	0	0	1	ISGur11 (IS481)
ARGENE301624	0	0	0	0	0	1	0	1	ISAcma31 (IS630)
ARGENE301754	0	0	0	0	0	1	0	1	ISPa32 (IS3)
ARGENE301759	1	0	0	0	0	0	0	1	ISNisp1 (IS3)
ARGENE300933	0	1	0	0	0	0	0	1	ISDha13 (IS200/IS605)
ARGENE300506	0	0	0	1	0	0	0	1	ISCce1 (IS481)
ARGENE300501	0	0	0	1	0	0	0	1	ISSpwi1 (IS3)
ARGENE302412	0	0	0	0	1	0	0	1	ISTesp1 (IS3)
ARGENE301900	0	0	0	0	0	1	0	1	ISCausp1 (IS3)
ARGENE301958	1	0	0	0	0	0	0	1	ISPa27 (IS256)
ARGENE302287	0	1	0	0	0	0	0	1	IS53K (IS21)
ARGENE302284	0	0	0	0	1	0	0	1	ISAZo5 (IS4)
ARGENE300015	0	0	0	0	1	0	0	1	ISThsp9 (Tn3)
ARGENE300651	0	0	0	1	0	0	0	1	ISMex22 (Tn3)
ARGENE301749	0	0	0	0	0	0	0	1	ISSStma5 (IS3)
ARGENE301406	0	0	0	0	0	0	0	1	ISCARN47 (IS256)
ARGENE302248	0	0	0	1	0	0	0	1	ISAs2 (IS30)
ARGENE302241	0	0	0	0	0	0	0	1	ISAZo31 (IS5)
ARGENE301644	1	0	0	0	0	0	0	1	ISAZo34 (IS256)
ARGENE300649	0	0	0	1	0	0	0	1	ISSfr1 (IS110)
ARGENE301510	0	0	0	0	1	0	0	1	IS1087 (IS3)
ARGENE301353	0	0	0	0	0	1	0	1	ISMsm12 (IS1380)

ARGENE300734	1	0	0	0	0	0	0	0	1	ISCsp1 (IS256)
ARGENE300917	0	0	0	0	1	0	0	0	1	ISMdi13 (IS256)
ARGENE300912	0	1	0	0	0	0	0	0	1	ISWsu1 (IS3)
ARGENE301994	0	0	0	1	0	0	0	0	1	ISRta2 (IS256)
ARGENE301491	0	0	0	0	1	0	0	0	1	ISYps3 (Tn3)
ARGENE302273	0	0	1	0	0	0	0	0	1	IS1353 (IS3)
ARGENE302277	0	0	0	1	0	0	0	0	1	IS1356 (IS256)
ARGENE302275	0	0	0	0	1	0	0	0	1	IS1355 (IS5)
ARGENE302505	1	0	0	0	0	0	0	0	1	ISPosp5 (IS3)
ARGENE302506	0	0	0	0	0	0	0	1	1	ISPosp4 (IS4)
ARGENE300354	0	0	0	0	1	0	0	0	1	ISRsp3 (IS21)
ARGENE300586	0	0	0	1	0	0	0	0	1	IS1236 (IS3)
ARGENE300369	0	0	0	0	0	0	0	1	1	ISDsp1 (IS3)
ARGENE301410	0	0	0	0	0	1	0	0	1	ISAzca2 (IS66)
ARGENE301984	0	0	0	1	0	0	0	0	1	ISCARN78 (IS21)
ARGENE301509	0	1	0	0	0	0	0	0	1	ISJsp2 (IS5)
ARGENE301504	0	1	0	0	0	0	0	0	1	ISEnfa200 (IS200/IS605)
ARGENE302088	0	0	0	0	1	0	0	0	1	ISRm13 (IS5)
ARGENE302264	0	0	0	1	0	0	0	0	1	IS693 (IS66)
ARGENE302263	0	0	1	0	0	0	0	0	1	ISMaq1 (IS3)
ARGENE300838	0	0	0	0	0	0	0	1	1	ISPa8 (IS5)
ARGENE302516	0	0	0	0	0	0	0	1	1	ISNeu2 (IS982)
ARGENE300542	0	0	0	1	0	0	0	0	1	ISAc2 (IS5)
ARGENE300545	0	0	0	0	0	1	0	0	1	IS1051 (IS5)
ARGENE300596	0	0	0	0	1	0	0	0	1	ISPre4 (IS21)
ARGENE300372	0	0	0	0	0	0	0	1	1	ISDsp2 (IS3)
ARGENE300684	0	0	0	0	1	0	0	0	1	ISSso1 (IS110)
ARGENE301376	0	0	0	1	0	0	0	0	1	ISNmo3 (IS481)
ARGENE301404	0	0	0	0	0	0	0	1	1	ISCARN45 (IS256)
ARGENE301401	0	0	0	0	0	1	0	0	1	ISCARN48 (IS66)
ARGENE301403	0	0	0	0	0	0	0	1	1	ISCARN44 (IS630)
ARGENE302071	0	0	0	1	0	0	0	0	1	ISMex7 (IS3)
ARGENE302078	0	0	0	0	1	0	0	0	1	ISXca1 (IS3)
ARGENE301883	0	1	0	0	0	0	0	0	1	ISMex14 (IS256)
ARGENE301885	0	0	0	0	0	1	0	0	1	ISMex12 (IS110)
ARGENE301888	0	0	1	0	0	0	0	0	1	ISMex11 (IS3)
ARGENE302326	0	0	0	0	0	1	0	0	1	ISPpu21 (IS5)
ARGENE302452	1	0	0	0	0	0	0	0	1	IS1383 (IS110)
ARGENE302450	0	0	0	0	0	1	0	0	1	IS1384 (IS5)
ARGENE300564	0	0	0	1	0	0	0	0	1	ISRde2 (IS3)
ARGENE300567	0	0	0	0	1	0	0	0	1	ISStma10 (IS630)
ARGENE300163	0	0	0	0	0	0	0	1	1	ISAd3 (IS3)

ARGENE300762	0	1	0	0	0	0	0	0	1	ISGNB1-1 (IS5)
ARGENE300784	0	0	0	1	0	0	0	0	1	IS1133 (IS3)
ARGENE300785	0	0	1	0	0	0	0	0	1	IS1132 (IS256)
ARGENE302065	1	0	0	0	0	0	0	0	1	ISABo1 (IS3)
ARGENE302068	0	0	0	0	0	0	1	0	1	ISPlu2 (IS200/IS605)
ARGENE301896	0	0	0	1	0	0	0	0	1	IS1240 (IS3)
ARGENE301898	0	1	0	0	0	0	0	0	1	IS1246 (IS5)
ARGENE301789	0	0	0	0	0	0	1	0	1	ISYen2B (IS21)
ARGENE302193	0	0	0	0	0	1	0	0	1	ISApr9 (IS1380)
ARGENE302195	0	0	0	0	0	1	0	0	1	ISApr8 (IS1380)
ARGENE300577	0	0	0	0	0	1	0	0	1	ISAs1 (ISAs1)
ARGENE302293	0	0	0	1	0	0	0	0	1	ISRasp1 (IS3)
ARGENE300312	0	0	0	0	0	1	0	0	1	ISVme1 (IS66)
ARGENE301318	0	0	0	0	0	1	0	0	1	IS1474 (IS21)
ARGENE300779	0	0	0	0	1	0	0	0	1	ISPst5 (IS5)
ARGENE300950	0	0	0	0	0	1	0	0	1	ISBusp2 (IS5)
ARGENE301227	0	0	0	1	0	0	0	0	1	ISSusp2 (IS3)
ARGENE301553	1	0	0	0	0	0	0	0	1	ISGme3 (IS5)
ARGENE302052	0	0	0	0	1	0	0	0	1	ISPsy17 (IS256)
ARGENE302051	0	0	0	1	0	0	0	0	1	ISAcma13 (IS3)
ARGENE301049	0	0	0	0	0	0	0	1	1	ISCARN20 (IS110)
ARGENE302239	0	0	0	0	0	1	0	0	1	ISThi1 (IS5)
ARGENE302231	1	0	0	0	0	0	0	0	1	ISPsy24 (IS3)
ARGENE302540	0	1	0	0	0	0	0	0	1	ISCARN114 (IS30)
ARGENE300094	0	0	0	0	0	1	0	0	1	IS1395 (IS256)
ARGENE300097	1	0	0	0	0	0	0	0	1	IS1396 (ISL3)
ARGENE300548	1	0	0	0	0	0	0	0	1	ISGdi10 (IS481)
ARGENE300436	0	0	0	0	0	1	0	0	1	ISSpu8 (IS630)
ARGENE300327	0	0	0	0	0	0	1	0	1	ISOba3 (IS1)
ARGENE301051	0	0	0	0	0	0	1	0	1	IS30D (IS30)
ARGENE300949	0	0	0	1	0	0	0	0	1	ISBusp1 (Tn3)
ARGENE300414	0	0	1	0	0	0	0	0	1	ISMca4 (IS3)
ARGENE300417	0	0	1	0	0	0	0	0	1	ISAz041 (IS5)
ARGENE302040	0	0	0	0	0	1	0	0	1	ISHne4 (IS110)
ARGENE302229	0	0	1	0	0	0	0	0	1	ISPsy20 (IS21)
ARGENE302225	0	1	0	0	0	0	0	0	1	ISPsy28 (IS3)
ARGENE301836	1	0	0	0	0	0	0	0	1	ISSpo4 (IS5)
ARGENE300159	0	0	0	0	0	1	0	0	1	ISXo17 (IS3)
ARGENE301332	1	0	0	0	0	0	0	0	1	IS1193D (ISL3)
ARGENE301330	0	0	0	0	1	0	0	0	1	ISMex29 (IS110)
ARGENE300552	1	0	0	0	0	0	0	0	1	ISGdi14 (IS3)
ARGENE301680	0	0	0	1	0	0	0	0	1	ISLxc1 (IS21)

[illegible]

ARGENE301676	0	0	0	1	0	0	0	0	1	ISSau1 (IS30)
ARGENE301273	0	0	0	0	0	1	0	0	1	ISAc1 (IS3)
ARGENE300871	1	0	0	0	0	0	0	0	1	ISBcen17 (IS3)
ARGENE300876	0	0	0	0	1	0	0	0	1	ISBcen18 (IS256)
ARGENE300875	0	0	0	0	0	0	1	0	1	ISBcen19 (IS66)
ARGENE301474	1	0	0	0	0	0	0	0	1	ISNmu3 (IS3)
ARGENE300478	1	0	0	0	0	0	0	0	1	ISAtu3 (IS3)
ARGENE301708	0	0	0	1	0	0	0	0	1	ISPca1 (IS4)
ARGENE301492	0	0	0	0	0	0	0	1	1	IS1311 (IS256)
ARGENE302007	0	0	0	0	0	1	0	0	1	IS1X1 (IS1)
ARGENE301202	0	0	0	0	0	1	0	0	1	ISMsi4 (IS3)
ARGENE301200	0	0	1	0	0	0	0	0	1	ISMsi2 (IS3)
ARGENE301497	0	0	0	1	0	0	0	0	1	ISSce1 (IS1)
ARGENE300334	0	0	0	0	0	1	0	0	1	ISR1 (IS3)
ARGENE302167	0	0	0	0	0	1	0	0	1	ISRssp8 (IS1380)
ARGENE301220	1	0	0	0	0	0	0	0	1	ISHha1 (IS3)
ARGENE301638	0	0	0	0	0	0	0	1	1	ISBmu2 (IS5)
ARGENE301935	0	0	0	0	0	1	0	0	1	ISCph2 (IS4)
ARGENE302337	0	0	0	0	0	0	1	0	1	ISMca2 (IS3)
ARGENE300515	0	0	0	0	1	0	0	0	1	ISBxe3 (IS481)
ARGENE300609	0	0	0	1	0	0	0	0	1	ISAb1 (IS4)
ARGENE300601	0	0	0	0	0	1	0	0	1	ISGur4 (IS4)
ARGENE300603	0	0	0	1	0	0	0	0	1	ISGur6 (IS3)
ARGENE300602	0	0	0	0	0	0	1	0	1	ISCod1 (IS3)
ARGENE300216	0	0	0	0	0	0	1	0	1	ISCARN6 (IS200/IS605)
ARGENE301735	0	0	0	1	0	0	0	0	1	ISRosp2 (IS3)
ARGENE300346	1	0	0	0	0	0	0	0	1	ISPen2 (IS3)
ARGENE302299	0	0	0	0	0	1	0	0	1	ISRso20 (IS3)
ARGENE302100	0	0	0	0	1	0	0	0	1	ISAnsp11 (IS3)
ARGENE300258	0	0	0	0	1	0	0	0	1	ISRme16 (IS5)
ARGENE301485	0	0	0	0	0	0	0	1	1	ISMex31 (IS110)
ARGENE300257	1	0	0	0	0	0	0	0	1	ISRme15 (IS3)
ARGENE302434	0	0	0	1	0	0	0	0	1	ISRpa2 (IS3)
ARGENE300071	0	0	1	0	0	0	0	0	1	ISPsp3 (IS5)
ARGENE300076	0	0	0	0	1	0	0	0	1	ISBlma7 (ISAs1)
ARGENE300704	0	0	0	0	0	1	0	0	1	ISMt1 (IS5)
ARGENE300252	0	0	0	1	0	0	0	0	1	ISSOR (IS4)
ARGENE300708	0	0	0	0	0	1	0	0	1	ISAp1 (IS4)
ARGENE300670	0	0	1	0	0	0	0	0	1	ISNieu2 (IS3)

^aIt is known that the ISVsa3 insertion sequence contain an ISCR2 transposase and ARGENE400003 and ARGENE302403 may therefore correspond to the same mobile elements. Note, however, that the ISCR2 transposase (ARGENE400003) is detected based on the presence of the peptide sequence of the transposase and is therefore likely to represent other configurations than the ISVsa3 insertion sequence.