Appendix A-13
Region 13

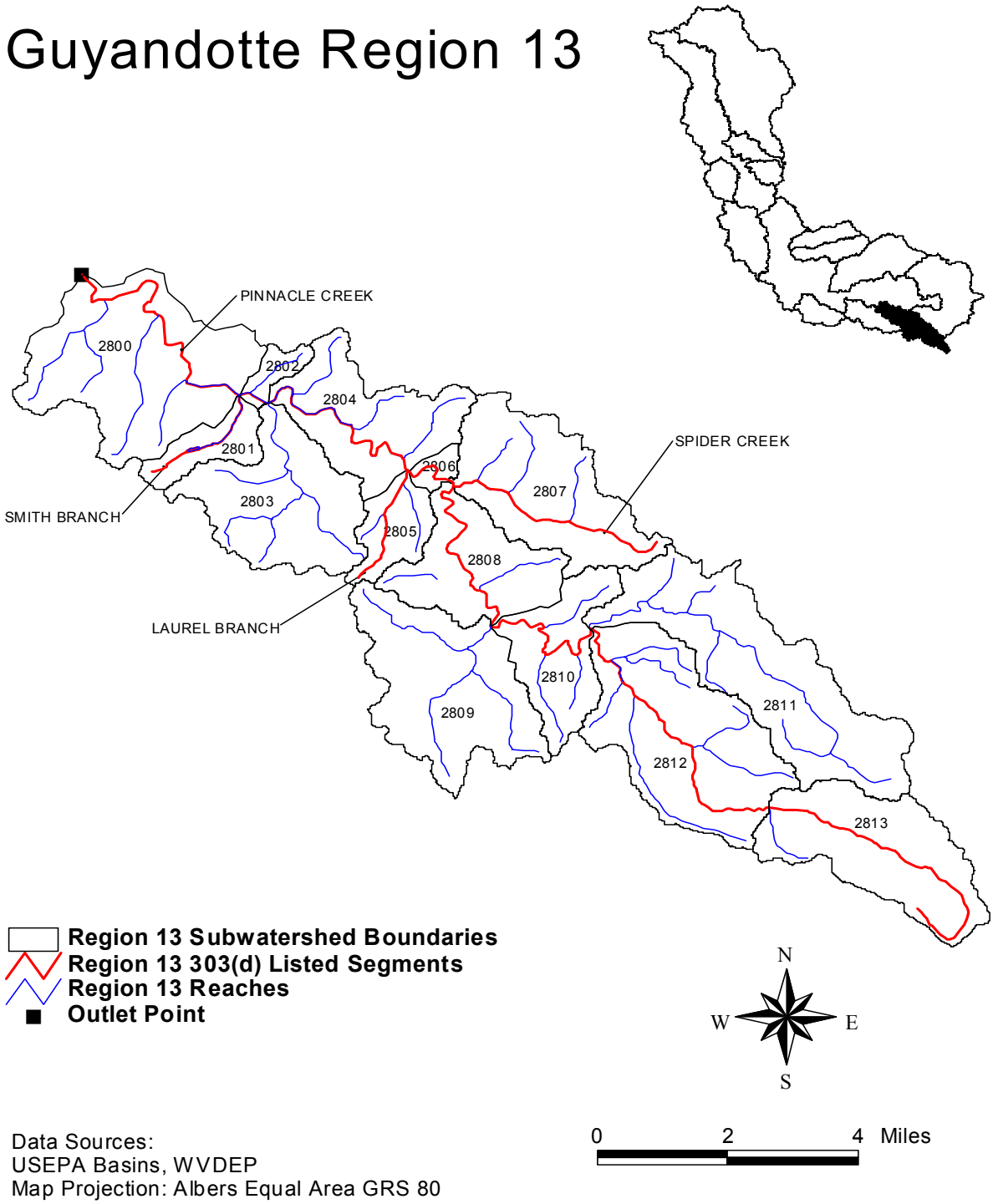

Figure 1. Region 13 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 13

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Laurel Branch	OG-124-H	Metals	2805		Aquatic Life, Human Health
Pinnacle Creek	OG-124	Metals	2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813		Aquatic Life (T), Human Health
Smith Branch	OG-124-D	Metals	2801		Aquatic Life, Human Health
Spider Creek	OG-124-I	Metals	2807		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2804
2811
2812
2813

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	150.00	150	150	1	09/06/00	09/06/00
2800	OG-124m3.7	100.00	100	100	1	08/29/00	08/29/00
2801	OG-124-0007	220.00	220	220	1	09/06/00	09/06/00
2804	OG-124m6.7	100.00	100	100	1	08/29/00	08/29/00
2804	OG-124m8.3	100.00	100	100	1	08/29/00	08/29/00
2805	OG-124-Hm	100.00	100	100	1	08/29/00	08/29/00
2806	16	60.17	27	137	6	11/02/02	07/02/03
2807	OG-124-Im	100.00	100	100	1	08/29/00	08/29/00
2811	OG-124-Nm3.7	100.00	100	100	1	09/05/00	09/05/00
2812	OG-124m20.6	100.00	100	100	1	09/05/00	09/05/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	180.00	180	180	1	09/06/00	09/06/00
2800	OG-124-0002	130.00	130	130	1	08/29/00	08/29/00
2801	OG-124-0007	350.00	350	350	1	09/06/00	09/06/00
2804	OG-124-0003	100.00	100	100	1	08/29/00	08/29/00
2804	OG-124-0004	110.00	110	110	1	08/29/00	08/29/00
2804	OG-124-0006	140.00	140	140	1	08/29/00	08/29/00
2805	OG-124-Hm	100.00	100	100	1	08/29/00	08/29/00
2806	16	154.71	70	278	7	11/02/02	07/02/03
2807	OG-124-0010	170.00	170	170	1	08/29/00	08/29/00
2811	OG-124-0011	660.00	660	660	1	09/05/00	09/05/00
2812	OG-124-0005	240.00	240	240	1	09/05/00	09/05/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	60.00	60	60	1	9/6/00	9/6/00
2800	OG-124m0.7	60.00	60	60	1	9/5/00	9/5/00
2800	OG-124m3.7	30.00	30	30	1	8/29/00	8/29/00
2801	OG-124-Dm	30.00	30	30	1	9/6/00	9/6/00
2804	OG-124m6.7	30.00	30	30	1	8/29/00	8/29/00
2804	OG-124m8.3	30.00	30	30	1	8/29/00	8/29/00
2805	OG-124-Hm	30.00	30	30	1	8/29/00	8/29/00
2806	16	126.67	90	170	3	11/2/02	7/2/03
2807	OG-124-0010	40	40	40	1	8/29/00	8/29/00
2811	OG-124-0011	160	160	160	1	9/5/00	9/5/00
2812	OG-124-0005	350.00	350	350	1	9/5/00	9/5/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	170.00	170	170	1	09/06/00	09/06/00
2800	OG-124-0002	90.00	90	90	1	08/29/00	08/29/00
2800	OG-124m0.7	170.00	170	170	1	09/05/00	09/05/00
2801	OG-124-0007	60.00	60	60	1	09/06/00	09/06/00
2804	OG-124-{7.0}-	30.00	30	30	1	08/29/00	08/29/00
2804	OG-124-0003	80.00	80	80	1	08/29/00	08/29/00
2804	OG-124-0004	90.00	90	90	1	08/29/00	08/29/00
2805	OG-124-0009	420.00	420	420	1	08/29/00	08/29/00
2806	16	323.33	70	1570	9	11/02/02	07/02/03
2807	OG-124-0010	40.00	40	40	1	08/29/00	08/29/00
2811	OG-124-0011	930.00	930	930	1	09/05/00	09/05/00
2812	OG-124-0005	480.00	480	480	1	09/05/00	09/05/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2806	16	74.44	30	150.0	9	11/02/02	07/02/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124m0.7	50.0	50.00	50.0	1	9/5/00	9/5/00
2800	OG-124m3.7	50.0	50.00	50.0	1	8/29/00	8/29/00
2801	OG-124-Dm	50.0	50.00	50.0	1	9/6/00	9/6/00
2804	OG-124-{7.0}-	50.0	50.00	50.0	1	8/29/00	8/29/00
2804	OG-124m6.7	50.0	50.00	50.0	1	8/29/00	8/29/00
2804	OG-124m8.3	50.0	50.00	50.0	1	8/29/00	8/29/00
2805	OG-124-0009	70.0	70.00	70.0	1	8/29/00	8/29/00
2806	16	105.6	50.00	240.0	9	11/2/02	7/2/03
2807	OG-124-Im	50.0	50.00	50.0	1	8/29/00	8/29/00
2811	OG-124-0011	110.0	110.00	110.0	1	9/5/00	9/5/00
2812	OG-124-0005	80.0	80.00	80.0	1	9/5/00	9/5/00
2812	OG-124m20.6	80.0	80.00	80.0	1	9/5/00	9/5/00

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No available data							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124m0.7	7.00	7.0	7.0	1	9/5/00	9/5/00
2800	OG-124m3.7	7.00	7.0	7.0	1	8/29/00	8/29/00
2801	OG-124-Dm	7.00	7.0	7.0	1	9/6/00	9/6/00
2804	OG-124-{7.0}-	7.00	7.0	7.0	1	8/29/00	8/29/00
2804	OG-124m6.7	7.00	7.0	7.0	1	8/29/00	8/29/00
2804	OG-124m8.3	7.00	7.0	7.0	1	8/29/00	8/29/00
2805	OG-124-Hm	7.00	7.0	7.0	1	8/29/00	8/29/00
2806	16	7.70	7.2	8.3	9	11/2/02	7/2/03
2807	OG-124-Im	7.00	7.0	7.0	1	8/29/00	8/29/00
2811	OG-124-Nm3.7	7.00	7.0	7.0	1	9/5/00	9/5/00
2812	OG-124m20.6	7.00	7.0	7.0	1	9/5/00	9/5/00

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2800	OG-124m0.7	143.0	143.0	143.0	1	9/5/00	9/5/00
2800	OG-124m3.7	20.0	20.0	20.0	1	8/29/00	8/29/00
2801	OG-124-Dm	20.0	20.0	20.0	1	9/6/00	9/6/00
2804	OG-124m6.7	20.0	20.0	20.0	1	8/29/00	8/29/00
2804	OG-124m8.3	20.0	20.0	20.0	1	8/29/00	8/29/00
2807	OG-124-Im	20.0	20.0	20.0	1	8/29/00	8/29/00
2811	OG-124-Nm3.7	640.0	640.0	640.0	1	9/5/00	9/5/00
2812	OG-124m20.6	250.0	250.0	250.0	1	9/5/00	9/5/00

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	1,341	1,341	3.20	0
2800	WV0090051	1,377	1,377	3.20	0
2800	WV1018531	1,382	1,382	3.20	0
2800	WV1018965	10,387	10,387	3.20	0
2801	WV0090051	240	240	3.20	0
2802	WV0090000	536	536	3.20	0
2803	WV0090000	487	268	1.76	45
2803	WV0090042	473	260	1.76	45
2803	WV0097446	7,104	3,907	1.76	45
2803	WV1018965	1,307	719	1.76	45
2804	WV0050521	827	827	3.20	0
2804	WV0090042	803	803	3.20	0
2805	WV0090000	156	117	2.40	25
2805	WV0097446	652	489	2.40	25
2807	WV0001848	34	34	3.20	0
2808	WV0097446	2,478	2,230	2.88	10
2808	WV1018736	6,961	6,265	2.88	10
2809	WV0097446	707	566	2.56	20
2809	WV1018736	4,967	3,973	2.56	20
2809	WV1018833	44	35	2.56	20
2810	WV1005936	433	433	3.20	0
2811	WV0001848	29	29	3.20	0
2811	WV1006649	179	179	3.20	0
2811	WV1018787	461	461	3.20	0
2812	WV1018779	6,615	5,954	2.88	10
2812	WV1018787	312	280	2.88	10

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	556	556	2.00	0
2800	WV0090051	570	570	2.00	0
2800	WV1018531	573	573	2.00	0
2800	WV1018965	4,303	4,303	2.00	0
2801	WV0090051	127	127	2.00	0
2802	WV0090000	324	324	2.00	0
2803	WV0090000	194	194	2.00	0
2803	WV0090042	189	189	2.00	0
2803	WV0097446	2,831	2,831	2.00	0
2803	WV1018965	521	521	2.00	0
2804	WV0050521	462	462	2.00	0
2804	WV0090042	448	448	2.00	0
2805	WV0090000	65	65	2.00	0
2805	WV0097446	270	270	2.00	0
2807	WV0001848	18	18	2.00	0
2808	WV0097446	944	944	2.00	0
2808	WV1018736	2,651	2,651	2.00	0
2809	WV0097446	270	270	2.00	0
2809	WV1018736	1,894	1,894	2.00	0
2809	WV1018833	17	17	2.00	0
2810	WV1005936	261	261	2.00	0
2811	WV0001848	18	18	2.00	0
2811	WV1006649	107	107	2.00	0
2811	WV1018787	277	277	2.00	0
2812	WV1018779	2,936	2,936	2.00	0
2812	WV1018787	138	138	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	1,309	1,309	3.27	0
2800	WV0090051	1,344	1,344	3.27	0
2800	WV1018531	1,349	1,349	3.27	0
2800	WV1018965	10,141	10,141	3.27	0
2801	WV0090051	241	241	3.27	0
2802	WV0090000	547	547	3.27	0
2803	WV0090000	476	476	3.27	0
2803	WV0090042	462	462	3.27	0
2803	WV0097446	6,940	6,940	3.27	0
2803	WV1018965	1,277	1,277	3.27	0
2804	WV0050521	838	838	3.27	0
2804	WV0090042	814	814	3.27	0
2805	WV0090000	153	153	3.27	0
2805	WV0097446	639	639	3.27	0
2807	WV0001848	34	34	3.27	0
2808	WV0097446	2,407	2,407	3.27	0
2808	WV1018736	6,761	6,761	3.27	0
2809	WV0097446	687	687	3.27	0
2809	WV1018736	4,823	4,823	3.27	0
2809	WV1018833	43	43	3.27	0
2810	WV1005936	442	442	3.27	0
2811	WV0001848	30	30	3.27	0
2811	WV1006649	182	182	3.27	0
2811	WV1018787	471	471	3.27	0
2812	WV1018779	6,759	6,759	3.27	0
2812	WV1018787	318	318	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	69	69	0	0	472	472	155	155	247	247	
2801	0	0	0	0	12	12	0	0	0	0	432	432	52	52	
2802	0	0	0	0	4	4	0	0	0	0	0	0	25	25	
2803	0	0	0	0	47	47	5	5	0	0	631	631	149	149	
2804	5	0	0	0	18	18	5	5	0	0	0	0	163	163	x
2805	0	0	0	0	1	1	1	1	0	0	0	0	52	52	
2806	0	0	0	0	2	2	0	0	0	0	0	0	14	14	
2807	0	0	0	0	88	88	1	1	0	0	0	0	196	196	
2808	0	0	0	0	40	40	1	1	0	0	0	0	112	112	
2809	0	0	0	0	67	67	3	3	0	0	0	0	210	210	
2810	0	0	0	0	31	31	2	2	3	3	0	0	109	109	
2811	419	25	0	0	178	178	3	3	26	26	58	58	1,527	1,527	x
2812	5,242	314	0	0	114	114	2	2	58	58	3	3	1,265	1,265	x
2813	12,332	740	0	0	146	146	3	3	0	0	0	0	942	942	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	82	82	0	0	1,337	1,337	198	198	671	671	
2801	0	0	0	0	95	33	0	0	0	0	3,672	1,285	151	151	x
2802	0	0	0	0	5	5	0	0	0	0	0	0	59	59	
2803	0	0	0	0	53	53	6	6	0	0	768	768	506	506	
2804	312	312	0	0	21	21	6	6	0	0	0	0	496	496	
2805	0	0	0	0	110	110	92	92	0	0	0	0	179	179	
2806	0	0	0	0	2	2	0	0	0	0	0	0	48	48	
2807	0	0	0	0	6,607	4,955	92	69	4	4	0	0	663	663	x
2808	0	0	0	0	47	47	1	1	0	0	0	0	381	381	
2809	0	0	0	0	78	78	4	4	0	0	0	0	705	705	
2810	0	0	0	0	37	37	3	3	8	8	0	0	368	368	
2811	2,844	2,844	0	0	140	140	29	29	148	148	521	521	904	904	
2812	26,208	9,173	0	0	83	83	18	18	329	329	26	26	750	750	x
2813	50,338	10,571	0	0	86	86	22	22	0	0	0	0	558	558	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	46	46	0	0	339	339	106	106	301	301	
2801	0	0	0	0	8	8	0	0	0	0	297	297	67	67	
2802	0	0	0	0	3	3	0	0	0	0	0	0	29	29	
2803	0	0	0	0	31	31	3	3	0	0	432	432	214	214	
2804	30	3	0	0	12	12	3	3	0	0	0	0	218	218	x
2805	0	0	0	0	1	1	1	1	0	0	0	0	75	75	
2806	0	0	0	0	1	1	0	0	0	0	0	0	20	20	
2807	0	0	0	0	59	59	1	1	0	0	0	0	280	280	
2808	0	0	0	0	27	27	1	1	0	0	0	0	160	160	
2809	0	0	0	0	45	45	2	2	0	0	0	0	301	301	
2810	0	0	0	0	21	21	2	2	2	2	0	0	155	155	
2811	1,418	142	0	0	180	180	4	4	29	29	69	69	1,677	1,677	x
2812	31,912	3,191	0	0	116	116	2	2	64	64	3	3	1,388	1,388	x
2813	92,273	9,227	0	0	148	148	3	3	0	0	0	0	1,033	1,033	x

Table 6. Fecal Coliform basline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2800	Pinnacle Creek	1.40E+13	9.78E+12	1.67E+13	1.67E+13	1.99E+14	0.00E+00	9.40E+12	6.58E+12