

## **Appendix C: Air Permits**

Table C.1. Air permits at the Y-12 Plant

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
<i>Part I—operating permits at Y-12 Plant</i>				
Y-9201-1-A	01-0020-15	730303P	582	Weld booths sanders and grinders
			583	Metal sanders and grinders
			584	Plasma torch
			585	Grinding room area exhaust
Y-9201-1-B	01-0020-59	730310P	586	Tool grinding machine shop
			587	Sand blaster exhaust
Y-9201-1-C	01-0020-17	036057P	278	Graphite carbon machine shop
			279	Graphite carbon machine shop
Y-9201-1-E	01-1020-92	035050P	00	Lead machining operations
			6	Welding shop sanding
Y-9201-1W-A	01-0020-99	036129P	00	Machine shop equipment
			272	Grit blasting
Y-9201-5-G	01-0020-44	730308P	412	DeVilbiss hood
			413	Acid pickling tanks
			75	Arc melt
			76	Scrap metal recycle
Y-9201-5-H	01-0020-16	026019P	762	Mixing process material
			763	Setup and sample area
			764	Vapor blaster
			765	Nickel plating tank exhaust
			766	Material handling
			767	Material handling
			768	Glovebox and blending station
			769	Inspection house vacuum
Y-9201-5-J	01-0020-21	730305P	276	Tool grinding machine shop
Y-9201-5E-B	01-0020-21	730305P	273	Electrochemical machine shop
			71	Machining operations L5N
			72	Vacuum inlets L5E machining
			73	Palarite shop-machine
Y-9201-5N-A	01-1020-18	730314P	67	Machine shop exhaust
Y-9201-5N-B	01-0020-30	030484P	239	Plating tanks and hoods
			240	Plating tanks and hoods
			241	Plating tanks and hoods
			242	Incinerator
			243	Grit blaster
			244	Grit blaster and area exhaust
			245	Process hoods
			454	Plating hoods

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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description			
Y-9202-A	01-0020-06	031696P	160	Laboratory beryllium			
			161	Laboratory beryllium			
Y-9204-2-A	01-0020-46	026107P	301	Storage tank			
			302	Storage tank			
			303	Storage tank			
			304	Storage tank			
			305	Storage tank			
			306	Storage tank			
			307	Storage tank			
			308	Storage tank			
			309	Storage tank			
			310	Storage tank			
			311	Storage tank/head tank			
			312	Storage tank			
Y-9204-2-B	01-0020-71	025954P	313	Caustic scrubber stack exhaust			
			314	Caustic scrubber exhaust			
			317	Lithium metal wash station			
Y-9204-2-D	01-1020-57	730327P	318	Lithium cell pan wash station			
			342	Salvage vats			
Y-9204-2-D	01-1020-57	730327P	343	Storage tank			
			344	Lithium chloride crystallizer			
			345	Lithium chloride crystallizer			
			346	Neutralizer			
			347	Process tank			
			348	Lithium chloride crystallizer			
			349	Processor tanks			
			350	Processor tank			
			Y-9204-2-E	01-1020-55	730325P	351	Oven
						352	Oven
356	Tungsten screener						
357	Dry box vent						
358	Material handling						
359	Gloveboxes						
360	Outgassing/annealing oven						
Y-9204-2-E	01-1020-55	730325P	361	Material handling			
			362	Gloveboxes			
			363	Reactor unloading station			

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			364	Reactor unloading station
			365	Metal ingot storage glovebox
			366	New metal ingot storage glovebox
Y-9204-2-F	01-0020-51	730309P	368	Classified
			369	Classified
			370	Classified
Y-9204-2-G	01-1020-79	730329P	371	Metal working machine shop
Y-9204-2E-A	01-0020-68	730312P	101	Lathes
			436	Exhaust hoods
			439	Hood exhaust
			444	Electropolishers
			445	Paint spray booth for dye
			370	Classified
Y-9204-3-A	01-0020-89	018208P	106	Furnaces
Y-9204-4-A	01-1020-56	032416P	415	Wash tank
			416	Exhaust from press pit area
			417	Dye penetrant hood exhaust
			85	Vent from two grit blasters
			86	Exhaust from press pit area
			87	Exhaust from press pit area
			88	Exhaust from press pit area
			91	Exhaust from ingot cooler
			93	Dust removal exhaust
			95	Salt baths
Y-9204-4-B	01-0020-72	730313P	481	Exhaust from machining operations
			482	Exhaust from hood - reclamation
			484	Rolling mill - 1st floor
			485	Exhaust from paint hood
			486	Filtering exhaust from paint booths
			488	Laboratory hoods - 1st floor
			489	Laboratory hoods - reclamation area
			490	Assembly process - 1st floor
			491	Assembly process - 1st floor
Y-9204-4-E	01-0020-33	032932P	258	Plating equipment
			259	Plating equipment
			260	Plating equipment
			261	Plating equipment
Y-9206-A	01-0020-48	012892P	421	Storage tank

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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
Y-9206-B	01-0020-03	731689P	13	South stack incinerator
			15	West stack
			16	Dissolving hood
			17	Steam cleaning hoods
			115	Reduction fluid bed
			135	AEC scrubber stack
			136	AEC consolidated stack
			208	Conversion fluid bed
			209	HF purge vent
			210	Chemical makeup area
			211	Hood 29 and 30
			212	Dry vacuum system
			Y-9206-C	01-1020-24
14	Uranium alloy production			
Y-9212-A	01-1020-72	036942P	111	Reduction fluid bed
			112	Conversion fluid beds
			132	Decontamination facility
			134	B-Wing and C-1 Wing exhaust
			19	Filter exhaust
			21	Centrifuges
			22	Reduction salvage crusher
			24	Calciner and dry vacuum system enclosure
			25	Denitrator area and fluid bed room enclosure
			27	D-Wing room 1010 hoods
			28	Reduction shear and room
			33	Headhouse equipment incinerator
			36	East scrubber (C-1 wing)
			40	B-1 sampling lab hood
			42	Chloride removal system (C-1)
429	Fluorine cylinder rack enclosure			
430	HF dock cylinder/vaporizer			
431	N <sub>2</sub> O <sub>4</sub> cylinder purge vent			
432	Muffle furnaces (2) vent room 229			
50	C-1 chip burner enclosure			
500	Primary extraction vent			
501	Secondary extraction vent			

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
Y-9212-B	01-0020-02	730301P	110	U metal and U metal alloy
			38	U metal drying and briquetting process
			43	Exhaust from chip washing
			48	E-Wing machine shop
Y-9212-C	01-0020-05	025984P	113	Dissolver trays/scrubber
			114	Shear and hacksaw hood
			128	Precipitation process
			26	Drum receiving/sampling hood and glovebox
			290	Tube furnace/gas purge vent
			44	Leaching and dissolving hoods
			45	Muffle furnace dry hoods
			46	Tray dissolver hoods
Y-9215-A	01-0020-37	731839P	3	Dissolver tray hoods/room 1
Y-9215-B	01-1020-51	732125P	1	Machine shop hood exhaust
			2	O-wing metal working operations
			4	Turco pretreat spray hood
			6	O-wing metal working operations
Y-9215-C	01-1020-52	730323P	6	O-wing metal working operations
			7	Base of rolling mill
Y-9215-D	01-1020-53	025966P	10	Metal process area
			11	Roll mill exhaust
			12	Furnace/quench tank/conveyor exhaust
Y-9401-2-A	01-0020-88	730286P	9	Hydraulic shear exhaust
			205	Rolling mill/salt bath
			220	Plating equipment
			221	Plating equipment
			222	Plating equipment
			223	Plating equipment
			224	Plating equipment
			225	Plating equipment
			226	Plating equipment
			227	Plating equipment
			228	Plating equipment
			229	Plating equipment
			230	Plating equipment
			231	Plating equipment

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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			232	Plating equipment
			233	Plating equipment
			234	Plating equipment
			235	Plating equipment
Y-9401-3-A	01-1020-31	034809P	170	Coal-fired boiler
Y-9401-3-B	01-1020-32	034809P	170	Coal-fired boiler
Y-9401-3-C	01-1020-33	034809P	171	Coal-fired boiler
Y-9401-3-D	01-1020-34	034809P	171	Coal-fired boiler
Y-9404-7-A	01-1020-89	034295P	00	Maintenance shop
Y-9404-9-C	01-1020-19	730315P	323	Halar oven
			324	Urethane warming oven
			325	Urethane oven #3
			326	PVC oven #4
			327	PVC oven #5
			328	Steam autoclave
			329	General use oven
			330	Halar spray booth
			331	Blue M oven
			332	Drape forming equipment
			333	Vacuum system
			336	Despatch oven
			337	Rubber preparation equipment
			338	Lab hood
			339	Despatch oven
			340	Vacuum pumps
			341	Plastics fume hood
Y-9616-10-A	01-1020-62	029280P	428	Sulfuric acid storage tank
Y-9616-7-B	01-1020-74	737019P	459	West end treatment storage
			460	West end treatment storage
			461	West end treatment storage
			462	West end treatment storage
			463	West end treatment vent reactor vessel
			464	West end treatment storage
			465	West end treatment vent degasifier unit
			466	West end treatment storage
			467	West end treatment storage
			468	West end treatment storage
			469	West end treatment vent lime silo
			470	West end treatment storage

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			471	WETF laboratory hood
			472	WETF sodium hydroxide tank
			473	WETF clarifier (6-315)
			650	Biological treatment tank
			651	Biological treatment tank
			652	Biological treatment tank
			653	Biological treatment tank
			654	Biological treatment tank
			655	Biological treatment tank
			656	Solids storage tank
			657	Solids storage tank
			658	Solids storage tank
			659	Solids storage tank
			660	Solids storage tank
			661	Solids storage tank
			662	Solids storage tank
			665	WETF-F-380A sludge settling
			666	WETF-F-380B sludge settling
			667	WETF-F-381A sludge concentrator
			668	WETF-F-381B sludge denitrator
			669	WETF-F-384 decant hold tank
			670	WETF-F-382 decant tank/30
			671	WETF-F-385 decant tank/30
			672	WETF-F-390A calcium carbonate
			673	WETF-F-390B calcium carbonate
			674	WETF-F-390C calcium carbonate
			675	WETF-F-400 F-401 slurry tank
Y-9703-16-A	01-1021-03	044659P	00	Surface coating operation
Y-9720-12-A	01-1020-89	034295P	00	Non-special nuclear material
Y-9720-15-A	01-1021-04	044793P	1078	Surface coating operation
Y-9720-25-A	01-1020-89	034295P	00	Drum storage warehouse
Y-9720-28-A	01-1020-89	034295P	00	Drum storage warehouse
Y-9720-31-A	01-1020-89	034295P	00	RCRA and mixed waste storage
Y-9720-32-A	01-0020-42	032547P	201	Classified waste shredder
			435	Classified paper incinerator
Y-9720-32-C	01-1020-99	742886I	435	Classified paper waste incinerator
Y-9720-44-A	01-1020-89	034295P	00	Low-level waste storage pad
Y-9720-58-A	01-1020-89	034295P	00	PCB and RCRA staging and storage
Y-9720-60-A	01-1020-89	034295P	00	DARA solids storage unit



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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
Y-9720-9-A	01-1020-89	034295P	00	PCB and RCRA hazardous waste
Y-9738-A	01-0020-14	036776P	576	Sand blaster
			577	Hood with fan
			578	Sand blaster
			579	Hood with fan
Y-9754-3-A	01-0020-07	039250P	00	Fuel service station
Y-9767-4-B	01-0020-38	036293P	00	Chilled water circulating system
Y-9811-1-A	01-1020-95	731997P	400	Waste oil/storage bulk storage
			401	Waste oil/storage bulk storage
			402	Waste oil/storage bulk storage
			403	Waste oil/storage bulk storage
			404	Waste oil/storage bulk storage
			405	Waste oil/storage bulk storage
Y-9811-1-B	01-1020-89	034295P	00	Waste oil/solvent drum storage
Y-9811-6-A	01-1020-82	029415P	377	Dry ash handling system
			378	Dry ash handling system
Y-9811-8-A	01-1020-63	032988P	407	Waste oil/solvent storage
			408	Waste oil/solvent storage
			409	Waste oil/solvent storage
			410	Waste oil/solvent storage
			411	Waste oil/solvent storage
Y-9811-8-B	01-1020-89	034295P	00	Waste oil/solvent drum storage
Y-9815-A	01-0020-11	025895P	780	Vent from dissolvers
			781	Nitric acid storage tank
			782	Nitric acid storage tank
			783	Storage tank/4400 gal
			784	Storage tank/1800 gal
			785	2 storage tanks/2200 gal
Y-9818-A	01-0020-12	025965P	790	Hot well seal tank
			791	10 storage tanks-nitric acid
			792	Bioreactor tanks/ozonation
			793	Basement exhaust
			794	Nitric acid supply line vent
			795	Calcium acetate storage tank
			796	Nitric waste storage tank
			797	Nitric waste storage tank
			798	Nitric acid storage tank
			799	Nitric acid storage tank

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			800	Ozone generator/area exhaust
			801	Nitric acid waste tank
			802	Caustic waste tank
			803	Still condensers
Y-9828-6-A	01-1020-89	034295P	00	Trash monitoring station
Y-9983-74-A	01-1020-89	034295P	00	Old salvage yard
Y-9998-A	01-0020-13	038154P	60	5 swagging machines
			61	Foundry operations
			62	Hood
			64	Nitric acid pickling tank
			812	Swagging machines
			813	Sintering furnaces
Y-9998-B	01-1020-84	025984P	172	Machining beryllium source
<i>Part II—Construction permits at Y-12 Plant</i>				
Y-9201-1-A	01-0020-15	730303P	582	Weld booths sanders and grinders
			583	Metal sanders and grinders
			584	Plasma torch
			585	Grinding room area exhausts
Y-9201-1-B	01-0020-59	730310P	586	Tool grinding machine shop
			587	Sand blaster exhaust
Y-9201-5-G	01-0020-44	730308P	412	DeVilbiss hood
			413	Acid pickling tanks
			75	Arc melt
			76	Scrap metal recycle
Y-9201-5-J	01-0020-21	730305P	276	Tool grinding machine shop
Y-9201-5E-B	01-0020-21	730305P	273	Electrochemical machine shop
			71	Machining operations L5N
			72	Vacuum inlets L5E machining
			73	Palarite shop-machine
Y-9201-5N-A	01-1020-18	730314P	67	Machine shop exhaust
Y-9204-2-D	01-1020-57	730327P	342	Salvage vats
			343	Storage tank
			344	Lithium chloride crystallizer
			345	Lithium chloride crystallizer
			346	Neutralizer
			347	Process tank
			348	Lithium chloride crystallizer
			349	Processor tanks
			350	Processor tank

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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
Y-9204-2-E	01-1020-55	730325P	351	Oven
			352	Oven
			356	Tungsten screener
			357	Dry box vent
			358	Material handling
			359	Gloveboxes
			360	Outgassing/annealing oven
			361	Material handling
			362	Gloveboxes
			363	Reactor unloading station
			364	Reactor unloading station
			365	Metal ingot storage glovebox
			366	New metal ingot storage glovebox
			Y-9204-2-F	01-0020-51
369	Classified			
370	Classified			
Y-9204-2-G	01-1020-79	730329P	371	Metal working machine shop
Y-9204-2E-A	01-0020-68	730312P	101	Lathes
			436	Exhaust hoods
			439	Hood exhaust
			444	Electropolishers
			445	Paint spray booth for dye
			370	Classified
Y-9204-4-B	01-0020-72	730313P	481	Exhaust from machining operations
			482	Exhaust from hood - reclamation
			484	Rolling mill - 1st floor
			485	Exhaust from paint hood
			486	Filtering exhaust from paint booths
			488	Laboratory hoods - 1st floor
			489	Laboratory hoods - reclamation area
			490	Assembly process - 1st floor
			491	Assembly process - 1st floor
Y-9206-B	01-0020-03	731689P	13	South stack incinerator
			15	West stack
			16	Dissolving hood
			17	Steam cleaning hoods
			115	Reduction fluid bed
			135	AEC scrubber stack
			136	AEC consolidated stack

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			208	Conversion fluid bed
			209	HF purge vent
			210	Chemical makeup area
			211	Hood 29 and 30
			212	Dry vacuum system
Y-9206-C	01-1020-24	730316P	12	Classified
			14	Uranium alloy production
Y-9212-B	01-0020-02	730301P	110	U metal and U metal alloy
			38	U metal drying and briquetting process
			43	Exhaust from chip washing
			48	E-Wing machine shop
Y-9215-B	01-1020-51	732125P	1	O-wing metal working operations
			2	Turco pretreat spray hood
			4	O-wing metal working operations
			6	O-wing metal working operations
Y-9215-C	01-1020-52	730323P	6	Base of rolling mill
			7	Metal process area
Y-9401-2-A	01-0020-88	730286P	205	Plating equipment
			220	Plating equipment
			221	Plating equipment
			222	Plating equipment
			223	Plating equipment
			224	Plating equipment
			225	Plating equipment
			226	Plating equipment
			227	Plating equipment
			228	Plating equipment
			229	Plating equipment
			230	Plating equipment
			231	Plating equipment
			232	Plating equipment
			233	Plating equipment
			234	Plating equipment
			235	Plating equipment
Y-9404-9-C	01-1020-19	730315P	323	Halar oven
			324	Urethane warming oven
			325	Urethane oven #3
			326	PVC oven #4

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**Table C.1 (continued)**

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			327	PVC oven #5
			328	Steam autoclave
			329	General use oven
			330	Halar spray booth
			331	Blue M oven
			332	Drape forming equipment
			333	Vacuum system
			336	Despatch oven
			337	Rubber preparation equipment
			338	Lab hood
			339	Despatch oven
			340	Vacuum pumps
			341	Plastics fume hood
Y-9616-7-B	01-1020-74	737019P	459	West end treatment storage
			460	West end treatment storage
			461	West end treatment storage
			462	West end treatment storage
			463	West end treatment vent reactor vessel
			464	West end treatment storage
			465	West end treatment vent degasifier unit
			466	West end treatment storage
			467	West end treatment storage
			468	West end treatment storage
			469	West end treatment vent lime silo
			470	West end treatment storage
			471	WETF laboratory hood
			472	WETF sodium hydroxide tank
			473	WETF clarifier (6-315)
			650	Biological treatment tank
			651	Biological treatment tank
			652	Biological treatment tank
			653	Biological treatment tank
			654	Biological treatment tank
			655	Biological treatment tank
			656	Solids storage tank
			657	Solids storage tank
			658	Solids storage tank
			659	Solids storage tank

Table C.1 (continued)

Y-12 Plant source number	Source reference number	Permit number	Stack	Stack description
			660	Solids storage tank
			661	Solids storage tank
			662	Solids storage tank
			665	WETF-F-380A sludge settling
			666	WETF-F-380B sludge settling
			667	WETF-F-381A sludge concentrator
			668	WETF-F-381B sludge denitrator
			669	WETF-F-384 decant hold tank
			670	WETF-F-382 decant tank/30
			671	WETF-F-385 decant tank/30
			672	WETF-F-390A calcium carbonate
			673	WETF-F-390B calcium carbonate
			674	WETF-F-390C calcium carbonate
			675	WETF-F-400 F-401 slurry tank
Y-9720-32-C	01-1020-99	742886I	435	Classified paper waste incinerator
Y-9811-1-A	01-1020-95	731997P	400	Waste oil/storage bulk storage
			401	Waste oil/storage bulk storage
			402	Waste oil/storage bulk storage
			403	Waste oil/storage bulk storage
			404	Waste oil/storage bulk storage
			405	Waste oil/storage bulk storage

**Oak Ridge Reservation****Table C.2. ORNL air permits**

Source number	Emission source reference number	TDEC permit number	Source description
X-2519-1/5	73-0112-03	030284P	Steam plant
X-2525-SV-11	73-0112-49	035026P	Electroplating shop
X-3039	73-0112-93	035494P	Off-gas and hot cell ventilation
X-3500-SV12	73-0112-73	036689P	Electric belt furnace
X-3502-01	73-0112-05	030881P	Spray booths (3)
X-3502-09	73-0112-94	027194P	Hood gluing
X-3502-SV1	73-0112-39	023808P	Oven curing
X-3502-SV2	73-0112-40	023807P	Oven tempering
X-3544-SV1	73-0112-70	730468P	Process Waste Treatment Plant
X-3587-SV1	73-0112-56	029830P	Printed circuit board facility
X-3608-01	73-0112-37	730489P	Nonrad Wastewater Treatment Plant, air stripper column
X-4508-SV8	73-0112-61	040077P	Acid etching process
X-4508-SV9	73-0112-55	024306P	Sandblaster
X-7005-00	73-0112-45	037516P	Lead shop machining operation
X-7005-3/7	73-0112-26	739585P	Five lead melting furnaces
X-7007	73-0112-09	743190P	Paint shop
X-7015-03	73-1106-47	945640P	Plasma arc torch
X-7021-00	73-0112-58	038357P	Grinding shop and sandblaster
X-7600-01	73-0112-20	017930P	Nuclear fuel reprocessing
X-7002-01	73-0112-24	027090F	Boiler, hot water
X-7603-01	73-0112-25	740219F	Steam boiler
X-7667-0	73-0112-0067-6	73-0112-0067-6	Chemical detonation facility
X-7877-SV1	73-0112-71	043761P	Liquid Waste Solidification Project
X-7911-00	73-0112-82	034381P	High Flux Isotope Reactor, 7920 and 7930
X-7934-SV2	73-0112-53	024912P	Silver recovery system
X-7935-SV1	73-0112-78	027393P	Equipment cleaning facility
X-FE	73-0112-97	029660P	Fugitive emission source

Table C.3. ETPP air permits

ETTP source number	Emission source reference number	Permit number	Source description	Permit type
K1037AVLISPRODCON	73-1106-36	935597P	Products conversion demonstration	Permit to construct
K1095PS1234	73-0106-14	734461P	Paint spray operation, one oven, two spray booths, and one silk screen degreaser	Operating
K1202ST1	73-1106-20	033203P	Tank stores waste oils and solvents for incinerator	Operating
K1202ST2	73-1106-41	034392P	Tank stores waste oils and solvents for incinerator	Operating
K1420AI	73-0106-82	034619P	Flammable materials storage tank	Operating
K1425WOSC	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSA	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSD	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSB	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1435TSCAINCIN	73-0106-78	0324491	TSCA Incinerator	Operating
K1435CTANKFARM	73-0106-75	037460P	Tank farm for hazardous liquid wastes	Operating
K1501BOILER7	73-0106-17	042076F	Gas/oil boiler	Operating
K1501BOILER8	73-0106-12	937114F	Gas/oil boiler	Operating
K1501BOILER9	73-0106-12	937114F	Gas/oil boiler	Operating
K1407CNFAIRSTRIPPER	73-0106-90	939748P	Air stripper for removing VOCs at CNF	Operating
K1775TVS	73-0106-91	944465P	LLMW vitrification system	Permit to construct
ETTPFUGITIVEEMISSIONS	73-1106-38	043016P	Number of sources logged into permit	Operating



**Oak Ridge Reservation**

**Table C.4. Periods of excess emissions and out-of-service conditions for Y-12 Plant Steam Plant east and west opacity monitors in 1996**

Date	Stack	Condition	Comments
February 27	East	Opacity monitoring equipment was out of service.	
March 13 and 14	West	Opacity monitoring equipment was out of service.	
May 7	East	Three six-minute periods of excess emissions.	Adjusting the air flow on #3 boiler caused the baghouse bypass to open due to a damaged electronic coil on the baghouse valve.
May 29	East and west	Opacity monitoring equipment was out of service.	Power outage to the boiler master panel.
June 20	West	Opacity monitoring equipment was out of service.	Maintenance was performed due to a damaged monitor filter.
August 8	East	Two six-minute periods of excess emissions.	A power failure caused the baghouse bypass to open.
August 13	West	One six-minute period of excess emissions.	A dirty clinker, caused by a buildup of coal around the burner, continued to burn after the boiler operation ceased.
October 15	East and west	Opacity monitoring equipment was out of service.	An electric power outage due to a transformer fire.
October 21	East	Six six-minute periods of excess emissions.	The cause was the startup of fans on boiler #3 after overhaul.
November 18	East	Opacity monitoring equipment was out of service.	Maintenance was performed due to an integrator board malfunction.
November 24	East	Two six-minute periods of excess emissions.	A reverse air fan malfunction increased the differential pressure causing baghouse 3 bypass dampers to open.