

Appendix E: Air Permits

Table E.1. Air permits at the Y-12 Complex, 2003

Y-12 Complex source number	Source reference number	Permit number	Stack	Stack description
Y-9201-1-A	01-0020-15	730303P	582	Weld booths sanders and grinders
			583	Metal sanders and grinders
			584	Plasma torch
Y-9201-1-B	01-0020-59	730310P	586	Tool grinding machine shop
Y-9201-1-C	01-0020-17	036057P	278	Graphite carbon machine shop
			279	Graphite carbon machine shop
Y-9201-1W-A	01-0020-99	036129P	272	Paint spray booth
Y-9201-5-G	01-0020-44	730308P	412	DeVilbiss hood
			413	Acid pickling tanks
			75	Arc melt
			76	Scrap metal recycle
Y-9201-5E-B	01-0020-21	730305P	71	Machine hood exhaust
			72	Chip vacuum system
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
			454	Plating hoods
Y-9201-5W-I	01-0020-21	730305P	I(00)	Machining equipment
Y-9202-A	01-0020-06	031696P	160	Laboratory beryllium
			161	Laboratory beryllium
Y-9204-2-B	01-0020-71	025954P	313	Caustic scrubber stack exhaust
			314	Caustic scrubber exhaust
			317	Lithium metal wash station
			318	Lithium cell pan wash station
Y-9204-2-D	01-1020-57	730327P	342	Salvage vats
			344	Lithium chloride crystallizer
			345	Lithium chloride crystallizer
			346	Neutralizer
			347	Process tank
			349	Reactor wash station
			350	Reactor wash station
Y-9204-2-E	01-1020-55	730325P	357	Glove box and oven
			359	Machine dust dumping station
			361	Gloveboxes
			363	Glovebox and four ovens
9204-2-E1	01-1020-55	730325P	364	Dry powder process
			351	Rotary dryer
			358	Gloveboxes, sonic sifter
			360	Rotary dryer
			362	Glovebox

Table E.1 (continued)

Y-12 Complex source number	Source reference number	Permit number	Stack	Stack description			
Y-9204-2-G	01-1020-79	730329P	371	Metal working machine shop			
			372	Metal working machine shop			
Y-9204-2E-A	01-0020-68	730312P	101	Lathes			
Y-9204-4-A	01-1020-56	032416P	415	Wash tank			
			416	Exhaust from press pit area			
			417	Dye penetrant hood exhaust			
			85	7500-ton press, vertical turret lathe			
			86	1500-ton press			
			87	1000-ton press, quench tank			
			88	Grit blaster			
			93	Vacuum quench furnace			
			95	Two salt baths			
			Y-9206-B	01-0020-03	731689P	13	South stack incinerator
						15	West stack
17	Steam cleaning hoods						
Y-9212-A	01-1020-72	743807P	211	Hood 29 and 30			
			111	Reduction fluid bed			
			112	Conversion fluid beds			
			134	B-Wing and C-1 Wing exhaust			
			141	Reduction fluid bed			
			142	Conversion fluid beds			
			27	D-Wing room 1010 hoods			
			28	Reduction shear and room			
			33	Headhouse equipment incinerator			
			40	B-1 sampling lab hood			
Y-9212-B	01-0020-02	730301P	432	Muffle furnaces (2) vent room 229			
			518	HF dock cylinder/vaporizer			
			110	U metal and U metal alloy			
Y-9212-C	01-0020-05	025984P	38	U metal drying and briquetting process			
			43	Exhaust from machine shop			
			48	Chip washing and drying			
			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			

Table E.1 (continued)

Y-12 Complex source number	Source reference number	Permit number	Stack	Stack description
			45	Muffle furnace dry hoods
			46	Tray dissolver hoods
			47	Tray dissolver hoods/room 1
Y-9212-M	01-0020-21	730305P	1083	Air bearing operations cleaning hood
Y-9215-A	01-0020-37	731839P	3	Machine shop hood exhaust - M-wing
Y-9215-B	01-1020-51	732125P	1	O-wing metal working operations
			4	O-wing metal working operations
Y-9215-C	01-1020-52	730323P	6	Base of rolling mill
			7	Metal process area
Y-9215-D	01-1020-53	025966P	10	Roll mill exhaust
			11	Furnace/quench tank/conveyor exhaust
			12	Hydraulic shear exhaust
			9	Rolling mill/salt bath
Y-9401-3-A	01-1020-31	034809F	170	Coal- or natural-gas-fired boiler
Y-9401-3-B	01-1020-32	034809F	170	Coal- or natural-gas-fired boiler
Y-9401-3-C	01-1020-33	034809F	171	Coal- or natural-gas-fired boiler
Y-9401-3-D	01-1020-34	034809F	171	Coal- or natural-gas-fired boiler
Y-9404-9-C	01-1020-19	730315P	324	Urethane warming ovens
			325	Urethane warming oven #3
			326	PVC oven #4
			327	PVC oven #5
Y-9720-32-C	01-1020-99	742886I	435	Classified paper waste incinerator
Y-9767-13-A	01-0020-35	036292P	A(00)	Chilled water circulating system
Y-9767-4-B	01-0020-38	036293P	B(00)	Chilled water circulating system
Y-9811-6-A	01-1020-82	029415P	377	Dry ash handling system
			378	Dry ash handling system
Y-9998-A	01-0020-13	038154P	60	Five swaging machines
			61	Foundry operations
			62	Hood
			64	Nitric acid pickling tank
			813	Sintering furnaces
Y-9998-B	01-1020-84	029584P	172	Machining beryllium source
Y-9998-F	01-1020-12	950266P	143	Metal-forming facility
Fugitive	01-1020-89	046044P	00	Plantwide fugitive sources

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Table E.2. Oak Ridge National Laboratory air permits, 2003^a

ORNL source number	Source description	Emission source reference number	TDEC permit number	Permit type
2519	Steam Plant Boilers 1-6, 516 mmBtu/h, Boiler 6 - NSPS	73-0112-03	055957F	Operating
3039 ^b	Off Gas & Hot Cell Ventilation	73-0112-93	739974P	Operating
3502	Manipulator Boot Shop	73-0112-05	947267P	Operating
3608 ^b	Air Stripper	73-0112-37	730489P	Operating
7007	Paint Shop	73-0112-09	743190P	Operating
7015	Plasma Arc Torch	73-1106-47	947142P	Operating
7602	Boiler, 16.75 mmBtu	73-0112-24	027090F	Operating
7603	Boiler, 6.048 mmBtu	73-0112-25	740219F	Operating
7911	HFIR and REDC	73-0112-82	034381P	Operating
8600	SNS CLO Boilers 2-14.65 mmBtu/hr Boilers (NSPS)	73-0112-33	956640F	Construction
8910	SNS CUB Boilers 2-8.37 mmBtu/hr Boilers	73-0112-07	954786F	Operating
NTRC	National Transportation Research Center	0941-02	0941-02	Operating (Knox County)

^aAbbreviations

CLO = Central Laboratory and Office

CUB = Central Utility Building

HFIR = High Flux Isotope Reactor

NSPS = New Source Performance Standards

REDC = Radiochemical Engineering Development Center

SNS = Spallation Neutron Source

^bOperated by Bechtel Jacobs

Table E.3. East Tennessee Technology Park air permits, 2003

ETTP source number	Emission source reference number	Permit number	Source description	Permit type
K1202ST1	73-1106-20	033203P	Tank storing waste oils and solvents for incinerator	Operating
K1202ST2	73-1106-41	034392P	Tank storing waste oils and solvents for incinerator	Operating
K1420AI	73-0106-82	034619P	Flammable materials storage tank	Operating
K1425WOSA	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSB	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSC	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1425WOSD	73-0106-11	029895P	Waste oil and solvent storage tanks	Operating
K1435TSCAINCIN	73-0106-78	032449I	Toxic Substances Control Act Incinerator	Operating
K1435CTANKFARM	73-0106-75	037460P	Tank farm for hazardous liquid wastes	Operating
K1407CNFAIRSTRIPPER	73-0106-90	045253P	Air stripper for removing volatile organic compounds at Central Neutralization Facility	Operating
K1775TVS	73-0106-91	944465P	Low-level mixed waste vitrification system	Permit to construct
ETTPFUGITIVEEMISSIONS	73-1106-38	043016P	Number of sources logged into permit	Operating

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Table E.4. Periods of excess emissions and out-of-service conditions for Y-12 Steam Plant east and west opacity monitors in 2003

Date	Stack	Condition	Comments
February 28	East	Opacity monitoring malfunction	The east stack opacity monitor window stuck
March 5	East and West	Opacity monitoring systems were taken out of service until May 2003	The old opacity monitors were replaced with new opacity monitors
May 22	West	Opacity monitoring system malfunction	Due to a power outage at the steam plant
June 13	East and West	Opacity monitoring system malfunction	Due to a power outage at the steam plant
August 8	East	Opacity monitoring system malfunction	The opacity monitor was failing calibration because it was analyzing opacity average and not opacity instantaneous
November 3	West	Opacity monitoring system malfunction	Due to a misalignment of the opacity monitor optical head, which was shifting as a result of a loose mounting bracket
November 18	West	Opacity monitoring system was taken out of service	To repair the mounting brackets of the opacity monitor head assembly