

## **Appendix E: Air Permits**



Table E.1. Air permits at the Y-12 Complex, 2001

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-F	-	-	821	Lindberg furnaces
			822	Lindberg furnaces
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-L	01-0020-23	952116P	1119	Ceramic machining operation
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
			89	Flowturn lathe, quench furnace
			90	Exhaust from salt bath
			91	Three quench tanks
			92	Billet grinding/quenching facility
			93	Vacuum quench furnace
			94	Plasma torch exhaust
			95	Two salt baths
Y-9206-B	01-0020-03	731689P	13	South stack incinerator
			15	West stack
			17	Steam cleaning hoods
			211	Hood 29 and 30
Y-9212-A	01-1020-72	743807P	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
			430	HF dock cylinder/vaporizer
			431	N <sub>2</sub> O <sub>4</sub> cylinder purge vent
			432	Muffle furnaces (2) vent room 229
			518	HF dock cylinder/vaporizer
Y-9212-B	01-0020-02	730301P	110	U metal and U metal alloy
			38	U metal drying and briquetting process
			43	Exhaust from machine shop
			48	Chip washing and drying
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

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-9215-B	01-1020-51	732125P	1	O-wing metal working operations
			2	Abar water quench vacuum
			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-9738-A	01-0020-14	036776P	576	Sandblaster
			577	Hood with fan
Y-9767-13-A	01-0020-35	036292P	00	Chilled water circulating system
Y-9767-4-B	01-0020-38	036293P	00	Chilled water circulating system
Y-9811-6-A	01-1020-82	029415P	377	Dry ash handling system
			378	Dry ash handling system
Y-9815-A	01-0020-11	742133P	780	Vent from dissolvers
Y-9998-A	01-0020-13	038154P	60	5 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, 2001<sup>a</sup>**

ORNL Source number	Source description	Emission source reference number	TDEC permit number	Permit type
2519-1/5	Steam plant boilers 1–5 and ash handling	73-0112-03	030284P	Operating
2519-6	NSPS boiler, 125 mmBtu	73-0112-03	949513F	Operating
3039	Off gas and hot cell ventilation	73-0112-93	739974P	Operating
3502	Manipulator Boot Shop	73-0112-05	947267P	Operating
3608	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
8910	Two boilers, 8.37 mmBtu/ boiler (SNS CUB)	73-0112-07	954786F	Construction
NTRC	National Transportation Research Center	0941-02	0941-02	Operating (Knox County)

<sup>a</sup>Abbreviations

CUB = Central Utility Building

HFIR = High Flux Isotope Reactor

NSPS = New Source Performance Standard

REDC = Radionuclide Engineering Development Center

SNS = Spallation Neutron Source

TDEC = Tennessee Department of Environment and Conservation

Table E.3. East Tennessee Technology Park air permits, 2001

ETTP source number	Emission source reference number	Permit number	Source description	Permit type
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	03244I	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
K-1066-EUF6CP	73-1106-48	94910P	UF <sub>6</sub> Cylinder Project	Permit to construct

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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 2001**

Date	Stack	Condition	Comments
January 29	East	One 6-min period of excess emissions	Boiler 3 ID fan controller malfunction caused the baghouse bypass dampers to open
March 9	East	One 6-min period of excess emissions	Boiler 4 malfunction during the Baghouse 4 cleaning cycle causing the baghouse bypass dampers to open
April 17–18	East and west	Opacity monitoring equipment was out of service	Annual calibration of the opacity monitors
July 1	West	Opacity monitor malfunction	Due to west stack shutter motor malfunction
October 8	East	Shutter malfunction	The east stack shutter stuck during self-check