

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
ENGINEERING AND COMPLIANCE
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P/O

COMPANY NAME AND ADDRESS

Exide Technologies
 2700 South Indiana Street
 Los Angeles, CA 90058

ID 124838

mailing and equipment address

EQUIPMENT DESCRIPTION

APPLICATION NO. 533204

TITLE V FACILITY PERMIT REVISION

APPLICATION NO. 533205 (previous A/N 496437)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, NO. 1, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533205 Permit to Construct Issued: Draft	D7	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533206 (previous A/N 496438)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, NO. 2, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533206 Permit to Construct Issued: Draft	D9	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533207 (previous A/N 496420)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, NO. 3, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533207 Permit to Construct Issued: Draft	D11	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (I) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (IA) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533208 (previous A/N 496421)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, NO. 4, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533208 Permit to Construct Issued: Draft	D13	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533209 (previous A/N 496423)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, NO. 5, NATURAL GAS, SPECIALTY LEAD, 2.5 MMBTU/HR A/N: 533209 Permit to Construct Issued: Draft	D15	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (I) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533210 (previous A/N 496424)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, A, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533210 Permit to Construct Issued: Draft	D17	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533211 (previous A/N 496425)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, B, NATURAL GAS, HARD LEAD, 2.5 MMBTU/HR A/N: 533211 Permit to Construct Issued: Draft	D19	C38 C39 C46 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533213 (previous A/N 496434)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, E, NATURAL GAS, SOFT LEAD, 2.5 MMBTU/HR A/N: 533213 Permit to Construct Issued: Draft	D34	C38 C39 C47 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533214 (previous A/N 496435)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, F, NATURAL GAS, SOFT LEAD, 2.5 MMBTU/HR A/N: 533214 Permit to Construct Issued: Draft	D36	C38 C39 C47 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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APPLICATION NO. 533215 (previous A/N 496433)

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: SECONDARY METALS, LEAD SMELTING PROCESS					
System 5: LEAD METAL REFINING SYSTEM					
FURNACE, POT, G, NATURAL GAS, SOFT LEAD, 2.5 MMBTU/HR A/N: 533215 Permit to Construct Issued: Draft	D32	C38 C39 C47 C156 C157	NOX: PROCESS UNIT**; SOX: PROCESS UNIT**	CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; LEAD: (10) [40CFR 63 Subpart X, #01, 1-29-1999]; NOX: 0.017 LBS/LB MATERIAL (1) [RULE 2012, 5-6-2005]; NOX: 0.077 LBS/LB MATERIAL (1A) [RULE 2012, 5-6-2005]; NOX: 130 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 405, 2-7-1986]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]; SOX: 0.133 LBS/LB MATERIAL (1) [RULE 2011, 5-6-2005]; SOX: 0.83 LBS/MMSCF NATURAL GAS (1) [RULE 2011, 5-6-2005]	A63.2, B295.2, B295.3, D12.8, D323.1, E71.1, E448.7, H116.2

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HISTORY

A/N 533204 was received on 3-7-2012 for a minor Tile V revision to the Facility Permit of Facility ID 124838. A/N's 533205-11 and 533213-15 were received for change of conditions on 3-7-2012. The purpose of these permit applications is to allow Exide to use a lower NOx RECLAIM emission factor in conjunction with the charging of Sodium Nitrate reagent to the refining pot furnaces at this facility.

The following tables summarize the recent permit history regarding the subject equipment:

FURNACE 1 (device no. D7)	
533205	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496437	Received 3/13/2009 for alteration to 374206 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14035 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374206	P/O F36585 issued 1/24/2001 for C/O
178389	P/O D34293 issued 11/29/1990

FURNACE 2 (device no. D9)	
533206	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496438	Received 3/13/2009 for alteration to 374208 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14036 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374208	P/O F36584 issued 1/24/2001 for C/O
178390	P/O D34308 issued 11/29/1990

FURNACE 3 (device no. D11)	
533207	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496420	Received 3/13/2009 for alteration to 374210 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14023 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374210	P/O F36577 issued 1/24/2001 for C/O
178391	P/O D23196 issued 4/18/1990

FURNACE 4 (device no. D13)	
533208	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496421	Received 3/13/2009 for alteration to 374211 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14024 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374211	P/O F36576 issued 1/24/2001
178392	P/O D22934 issued 4/11/1990

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FURNACE 5 (device no. D15)	
533209	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496423	Received 3/13/2009 for alteration to 374212 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14025 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374212	P/O F36575 issued 1/24/2001 for C/O
178393	P/O D22931 issued 4/11/1990

FURNACE A (device no. D17)	
533210	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496424	Received 3/13/2009 for alteration to 374199 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14026 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374199	P/O F36597 issued 1/24/2001 for C/O
178384	P/O D22935 issued 4/11/1990

FURNACE B (device no. D19)	
533211	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496425	Received 3/13/2009 for alteration to 374200 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14027 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374200	P/O F36581 issued 1/24/2001 for C/O
178385	P/O D22932 issued 4/11/1990

FURNACE E (device no. D34)	
533213	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496434	Received 3/13/2009 for alteration to 374201 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14033 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374201	P/O F36579 issued 1/24/2001 for C/O
178386	P/O D22933 issued 4/11/1990

FURNACE F (device no. D36)	
533214	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496435	Received 3/13/2009 for alteration to 374202 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14034 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374202	P/O F36569 issued 1/24/2001 for C/O
178387	P/O D23197 issued 4/18/1990

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FURNACE G (device no. D32)	
533215	Received 3-7-2012 for change of conditions to change NOx factor for NaNO ₃ reagent.
496433	Received 3/13/2009 for alteration to 374204 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14032 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
374204	P/O F36578 issued 1/24/2001 for C/O
178388	P/O D23195 issued 4/18/1990

Previous permit actions regarding other pot furnaces:

FURNACE 6 (device no. D24)	
496426	Received 3/13/2009 for alteration to 374214 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14028 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
414800	received 4/30/2003 to change NOx factor for NaNO ₃ reagent - P/O pending
374214	P/O F36574 issued 1/24/2001 for C/O
178394	P/O D34309 issued 11/29/1990

FURNACE 7 (device no. D26)	
496428	Received 3/13/2009 for alteration to 374215 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14029 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
415067	received 5/07/2003 to change NOx factor for NaNO ₃ reagent - P/O pending
374215	P/O F36570 issued 1/24/2001 for C/O
178395	P/O D34310 issued 11/29/1990

FURNACE 8 (device no. D28)	
496429	Received 3/13/2009 for alteration to 374216 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14030 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
415069	received 5/07/2003 to change NOx factor for NaNO ₃ reagent - P/O pending
374216	P/O F36707 issued 1/25/2001 for C/O
178396	P/O D34311 issued 11/29/1990

FURNACE 9 (device no. D30)	
496432	Received 3/13/2009 for alteration to 374217 by the venting of the burner exhaust to dust collector of 496416. P/C issued 6/24/2009. P/O G14031 issued (in database) on 6/30/2011. Official TV Facility Permit issued (Section D) on 7-28-2011.
415071	received 5/07/2003 to change NOx factor for NaNO ₃ reagent - P/O pending
374217	P/O F36708 issued 1/25/2001 for C/O
178397	P/O D34312 issued 11/29/1990

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PROCESS DESCRIPTION

BACKGROUND

Exide is a secondary lead smelter. Raw lead metal produced in the reverberatory and cupola (blast) furnaces is transferred into refining pot furnaces (14 total) to adjust alloy composition and produce soft lead (i.e., pure lead) and/or hard lead (lead metal containing alloying agents, such as arsenic, antimony, etc.). The lead metal in the pot furnaces is purified and the alloy content adjusted by mixing the molten lead metal with chemical reagents and alloying agents. One of these materials is sodium nitrate.

NO_x EMISSION FACTORS FOR POT FURNACES

Exide Technologies previously submitted Application Nos. 414800, 415067, 415069, and 415071 to change the existing NO_x emission factor of 0.077 pounds NO_x per pound of sodium nitrate added (for soft lead refining furnaces identified as devices D24, D26, D28 and D30) to 0.017 pounds NO_x per pound of sodium nitrate added based on an improved sodium nitrate feed process which was the subject of source tests conducted by Almega Environmental & Technical Services, Inc. on October 2 – November 27, 2001. The test data was evaluated by the AQMD's source testing group and the reported emission factor of 0.017 lbs NO_x per pound of sodium nitrate added was determined to be acceptable based on the operating range statistical criteria (per RECLAIM rules). The previously existing NO_x emission factor of 0.077 pounds NO_x per pound of sodium nitrate added to the lead refining furnaces is the AQMD's default emission factor taken from Table 1 of Rule 2002 for lead refining pot furnaces. The improved feed method consists of the use of a feed screw conveyor to gradually charge the sodium nitrate into the pots, versus the previous method of charging this material into the pot furnaces in bulk.

Charging sodium nitrate in bulk results in higher emissions of NO_x, due to the thermal decomposition of the sodium nitrate. Gradual, even charging allows the nitrate (an oxidizing agent) to react more completely with metals in the pot furnace, forming metal oxides, which float to the top of the molten lead metal as dross and are subsequently skimmed off, carrying off impurities in the lead metal. By inducing a more complete reaction of the nitrate (oxidizer) with the metals (reducing agent), less oxygen is available for the formation of NO_x gas emissions, and the nitrogen in the nitrate is emitted more as nitrogen gas and less as NO_x.

As previously indicated, 4 of the 14 pot furnaces at this facility were previously permitted to use the lower NO_x feed factor. Exide encountered problems in a subsequent RECLAIM audit because they wanted to use the lower factor versus the higher factor, as described above, for reporting NO_x emissions due to sodium nitrate usage. The current set of permit applications will change the emission factor and the associated permit condition in the Facility Permit so that the factor can be used for all of the pot furnaces. Exide claims that all sodium nitrate is now charged with the screw conveyor charging method.

The subject equipment is operated 24 hours/day and 365 days/year.

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CALCULATIONS

DATA

For data and calculations not shown, refer to the appendix and the previous Permit to Construct evaluation reports.

EMISSIONS SUMMARY FOR POT FURNACES

Note: Sulfur is added only to kettle nos. 1, 2, 6, 7, 8, 9
 NOx from sodium nitrate was not calculated in previous evaluations and will now be calculated to correctly adjust the New Source Review database with the correct emission rates for NOx. There is no emissions increase due to this evaluation. All emissions are baseline emissions. The worst case factor is used for the NOx emissions calculation.

NOx, NaNO₃, lbs/day, max 30 day ave = 2701.7 lbs NaNO₃ x 0.077 lb/lb = 208.03 lbs/day total
 NOx, NaNO₃, lbs/day = 14.86 lbs/day per pot (14 pots total)
 NOx, burners, lbs/day = 3.99 lbs/day per pot
 NOx, total, lbs/day = 18.85 lbs/day per pot = 0.7854 lbs/hr (based on 24 hours per day)

Max hourly emissions

Current A/N	Previous A/N	C/O A/N	Previous A/N	Kettle No.	ROG, R1 = R2	NOx, R1 = R2	SOx, R1 = R2	CO, R1 = R2	PM10 R1	PM10 R2
533205	496437	374206	178389	1	0.0088	0.7854	0.8933	0.0413	0.7417	0.0148
533206	496438	374208	178390	2	0.0088	0.7854	0.8933	0.0413	0.7417	0.0148
533207	496420	374210	178391	3	0.0088	0.7854	0.0600	0.0413	0.7417	0.0148
533208	496421	374211	178392	4	0.0088	0.7854	0.0600	0.0413	0.7417	0.0148
533209	496423	374212	178393	5	0.0088	0.7854	0.0600	0.0413	0.3983	0.0080
533210	496424	374199	178384	A	0.0088	0.7854	0.0600	0.0413	1.6717	0.0334
533211	496425	374200	178385	B	0.0088	0.7854	0.0600	0.0413	1.6717	0.0334
533213	496434	374201	178386	E	0.0088	0.7854	0.0600	0.0413	2.3421	0.0468
533214	496435	374202	178387	F	0.0088	0.7854	0.0600	0.0413	2.3421	0.0468
533215	496433	374204	178388	G	0.0088	0.7854	0.0600	0.0413	2.3421	0.0468
N/A	496426	374214	178394	6	0.0088	0.7854	0.8933	0.0413	1.7588	0.0352
N/A	496428	374215	178395	7	0.0088	0.7854	0.8933	0.0413	1.7588	0.0352
N/A	496429	374216	178396	8	0.0088	0.7854	0.8933	0.0413	1.7588	0.0352
N/A	496432	374217	178397	9	0.0088	0.7854	0.8933	0.0413	1.7588	0.0352
Totals, lbs/hr					0.12	11.00	5.84	0.58	20.77	0.42
Totals, lbs/day					2.94	263.89	140.16	13.86	498.47	9.97

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EMISSIONS SUMMARY FOR POT FURNACES (cont.)

Max daily emissions

Current A/N	Previous A/N	C/O A/N	Previous A/N	Kettle No.	ROG R1 = R2	NOx R1 = R2	SOx R1 = R2	CO R1 = R2	PM10 R1	PM10 R2
533205	496437	374206	178389	1	0.21	18.85	21.44	0.99	17.8	0.36
533206	496438	374208	178390	2	0.21	18.85	21.44	0.99	17.8	0.36
533207	496420	374210	178391	3	0.21	18.85	1.44	0.99	17.8	0.36
533208	496421	374211	178392	4	0.21	18.85	1.44	0.99	17.8	0.36
533209	496423	374212	178393	5	0.21	18.85	1.44	0.99	9.56	0.19
533210	496424	374199	178384	A	0.21	18.85	1.44	0.99	40.12	0.80
533211	496425	374200	178385	B	0.21	18.85	1.44	0.99	40.12	0.80
533213	496434	374201	178386	E	0.21	18.85	1.44	0.99	56.21	1.12
533214	496435	374202	178387	F	0.21	18.85	1.44	0.99	56.21	1.12
533215	496433	374204	178388	G	0.21	18.85	1.44	0.99	56.21	1.12
N/A	496426	374214	178394	6	0.21	18.85	21.44	0.99	42.21	0.84
N/A	496428	374215	178395	7	0.21	18.85	21.44	0.99	42.21	0.84
N/A	496429	374216	178396	8	0.21	18.85	21.44	0.99	42.21	0.84
N/A	496432	374217	178397	9	0.21	18.85	21.44	0.99	42.21	0.84
Totals, lbs/day					2.94	263.89	140.16	13.86	498.47	9.97
Total, lbs/day 30 day Ave.					3	264	140	14	498	10

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EMISSIONS SUMMARY FOR POT FURNACES (cont.)

30 day ave. Emissions, lbs/day (math rounding corrected for data entry)

Current A/N	Previous A/N	C/O A/N	Previous A/N	Kettle No.	ROG, R1 = R2	NOx, R1 = R2	SOx, R1 = R2	CO, R1 = R2	PM10 R2
533205	496437	374206	178389	1	0	19	21	1	1
533206	496438	374208	178390	2	0	19	22	1	0
533207	496420	374210	178391	3	0	19	1	1	0
533208	496421	374211	178392	4	0	19	2	1	0
533209	496423	374212	178393	5	1	19	1	1	0
533210	496424	374199	178384	A	0	19	1	1	1
533211	496425	374200	178385	B	0	19	2	1	1
533213	496434	374201	178386	E	0	19	1	1	1
533214	496435	374202	178387	F	0	19	2	1	1
533215	496433	374204	178388	G	1	19	1	1	1
N/A	496426	374214	178394	6	0	18	21	1	1
N/A	496428	374215	178395	7	0	19	22	1	1
N/A	496429	374216	178396	8	0	18	21	1	1
N/A	496432	374217	178397	9	1	19	22	1	1
Total, lbs/day 30 day Ave.					3	264	140	14	10

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EMISSIONS SUMMARY FOR POT FURNACES (cont.)

Max annual emissions, lbs/yr

Current A/N	Previous A/N	C/O A/N	Previous A/N	Kettle No.	ROG R1 = R2	NOx R1 = R2	SOx R1 = R2	CO R1 = R2	PM10 R2
533205	496437	374206	178389	1	76.65	6879.95	7825.60	361.35	129.94
533206	496438	374208	178390	2	76.65	6879.95	7825.60	361.35	129.94
533207	496420	374210	178391	3	76.65	6879.95	525.60	361.35	129.94
533208	496421	374211	178392	4	76.65	6879.95	525.60	361.35	129.94
533209	496423	374212	178393	5	76.65	6879.95	525.60	361.35	69.79
533210	496424	374199	178384	A	76.65	6879.95	525.60	361.35	292.88
533211	496425	374200	178385	B	76.65	6879.95	525.60	361.35	292.88
533213	496434	374201	178386	E	76.65	6879.95	525.60	361.35	410.33
533214	496435	374202	178387	F	76.65	6879.95	525.60	361.35	410.33
533215	496433	374204	178388	G	76.65	6879.95	525.60	361.35	410.33
N/A	496426	374214	178394	6	76.65	6879.95	7825.60	361.35	308.13
N/A	496428	374215	178395	7	76.65	6879.95	7825.60	361.35	308.13
N/A	496429	374216	178396	8	76.65	6879.95	7825.60	361.35	308.13
N/A	496432	374217	178397	9	76.65	6879.95	7825.60	361.35	308.13
Totals lbs/yr					1073.10	96319.24	51158.40	5058.90	3638.83

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EVALUATION

CEQA

There are no emissions increases resulting from the proposed change of conditions. Therefore a CEQA evaluation is not required in this case.

RULE 212

There are no emissions increases in emissions and no increases in health risk resulting from the proposed change of conditions. Therefore a Rule 212 public notice is not required in this case.

RULE 401

Operation of the subject equipment is not expected to cause visible emissions in excess of the limits in this rule. Therefore, compliance is expected.

RULE 402

Since the process equipment is vented to baghouses and/or scrubbers, nuisance complaints due to dust and odors is not expected during normal operation of the subject equipment at this facility.

RULE 404

Previous evaluations have shown compliance with the particulate concentration limits in this rule.

RULE 405

Previous evaluations have shown compliance with the particulate emission limits in this rule.

RULE 1401

There is no health risk increase resulting from this set of applications. Therefore, compliance with this rule is expected.

RULE 1407/1420

Previous source tests have demonstrated that all APCS equipment at this facility has at least 98% control efficiency on lead emissions. This facility is in compliance with all applicable requirements in these rules.

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RULE 1420.1

This facility is in compliance with all applicable requirements in this rule, including, but not limited to, the 0.15 ug/m³ ambient lead concentration limit.

40CFR63 Supart X (LEAD NESHAP)

The pot furnaces at this facility are vented to baghouses which have previously been source tested and determined to be in compliance with the 2.0 mg/DSCM lead concentration limit in this rule.

REGULATION XIII/BACT

There is no emissions increase as a result of this change of conditions. Therefore, emissions offsets and a BACT evaluation are not required. The NOx emission rate due to sodium nitrate is being adjusted at this time in order to correct the baseline emissions in the NSR database.

REGULATION 30, TITLE V

Since there will not be any emission increases as a result of the current permit applications, the current change of conditions is considered to be a Title V minor permit revision under this regulation.

CAM

CAM requirements pertain to the requirements of 40 CFR 64, Continuous Assurance Monitoring. The CAM rule contains specific federal monitoring requirements for process equipment which is vented by air pollution control systems where the facilities which are major sources, as defined in Title V (Reg 30). Permit conditions currently ensure compliance with CAM requirements. The following APC systems in operation at Exide are subject to CAM requirements. These APC systems have the following conditions associated with them:

APCS	Device ID	REQUIRED CONDITIONS
APCS #1 Reverb furnace baghouse	C40, C41	C6.3, D12.5, D12.6, D12.11, D381.1, E102.1, E193.1, H116.1, H116.2, H116.4, K67.2
APCS #2 Blast furnace baghouse	C45	C6.3, D12.5, D12.6, D12.11, D381.1, E102.1, E193.1, H116.1, H116.2, H116.4, K67.2
APCS #5 Hard lead (pot furnace) baghouse	C46	D12.6, D12.7, D12.10, D12.11, D381.1, E102.1, H116.1, H116.2, H116.4, K67.3, E193.1
APCS #6 Soft lead (pot furnace) baghouse	C47	D12.6, D12.7, D12.10, D12.11, D381.1, E102.1, H116.1, H116.2, H116.4, K67.3, E193.1
Rotary dryer baghouse	C144	C6.2, D12.5, D12.6, D381.1, E102.1, E193.1, H116.1, H116.2, H116.4, K67.2

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APCS	Device ID	REQUIRED CONDITIONS
Blast/Reverb Furnace Common Stack Outlet	S139	A63.1, D82.1, D323.1, K67.9

DISCUSSION

There are no emission increases associated with the proposed change of conditions. Permit conditions will ensure compliance with all applicable rules and regulations.

RECOMMENDATION

APPLICATION NO. 533204

Approve Title V minor permit revision.

APPLICATION NOS. 533205, 533206, 533207, 533208, 533209,
533210, 533211, 533213, 533214, 533215

Issue Permit to Operate for the subject equipment pursuant to the conditions in section D of the Facility Permit, and in accordance with the following modified permit condition (**changes indicated in bold and highlighted.**)

E448.7 The operator shall comply with the following requirements:

- A) Sodium nitrate added to the refining pot furnaces of device nos. **D7, D9, D11, D13, D15, D17, D19, D24, D26, D28, D30, D32, D34, and D36, inclusive**, shall only be charged by means of a screw conveyor feed system, **except during a screw conveyor feed system malfunction.**
- B) The operator shall keep a log indicating the total pounds of sodium nitrate charged to each pot furnace with a screw conveyor feed system each day and the corresponding device number of each pot furnace to which sodium nitrate is charged with a screw conveyor feed system.
- C) **If the feed screw conveyor malfunctions, and the operator is required to charge sodium nitrate without a screw conveyor**, the operator shall keep a log of the total pounds of sodium nitrate charged to each pot furnace without a screw conveyor feed system each day and the device number of each pot furnace to which sodium nitrate is charged without a screw conveyor feed system.
- D) For the purpose of the RECLAIM NOx emission factor from sodium nitrate, a factor of 0.017 LBS/LB shall be used when sodium nitrate charged to a pot furnace is performed only with a screw conveyor feed system.

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- E) For the purpose of the RECLAIM NO_x emission factor from sodium nitrate, a factor of 0.077 LBS/LB shall be used when sodium nitrate charged to a pot furnace is performed without a screw conveyor feed system.
- F) **The operator shall keep a log of each screw conveyor feed system malfunction event. This log shall include the date(s) and duration for each malfunction, reason(s) for each malfunction, and the action(s) taken to place the screw conveyor feed system back into operation following each malfunction.**
- G) **The operator shall inspect and maintain all components of the sodium nitrate feed screw conveyor equipment on an annual basis, and more often if necessary, in accordance with the manufacturer's specifications.**

[RULE 2012, 5-6-2005]

[Devices subject to this condition : D7, D9, D11, D13, D15, D17, D19, D24, D26, D28, D30, D32, D34, D36]