CITY OF PHILADELPHIA

Env mental Protection Division
321 University Avenue
Philadelphia, PA 19104

Telephone - 215-685-7572
Fax - 215-685-7593

ESTELLE B. RICHMAN
Health Commissioner

JOHN F. DOMZALSKI
Deputy Health Commissioner For Environmental Protection

Robert T. Ostrowski
Director For Air Management Services

September 21, 1994

Mr. William Duffin
Administration Manager
Anzon, Inc.
2545 Aramingo Ave.
Philadelphia, PA 19125

Dear Mr. Duffin:

You are hereby notified that the Air Management operating licenses listed below are amended, effective immediately, to include the conditions contained in the attached License (Permit) to Operate Equipment Venting Into Atmosphere and dated 9/21/94 (Pb SIP Permit). The affected licenses are:

1. 646705 Vac Clean System
2. 646707 Barton Pots
3. 650111 Furnaces
4. 647076 Blending & Packing
5. 679011 Oxide General
6. 690071 Littleford Processes
7. 690072 Bldg 44 Raw Materials
8. 690077 Bldg 44 Blending
9. 690078 Bldg 44 Stranding

The operating Permit shall remain enforceable by the U.S. EPA as part of the State Implementation Plan not withstanding any expiration of this license (permit). The Pb SIP Permit shall serve as the Philadelphia regulations applicable to your source for the purpose of attaining and maintaining compliance with the lead National Ambient Air Quality Standards (NAAQS). Other regulations will continue to be in effect and will apply in addition to the Pb SIP Permit requirements.

If you have any questions, please contact me at 215-685-7572.

Sincerely,

Edward Wiener
District Engineer

:if

attachment: PB SIP Permit

cc: Jerome Balter, Esq.
PILCOP
125 S. 9th Street, Suite 700
Philadelphia PA 19107

Reena E. Parambath, Esq.
Asst. City Solicitor
City of Philadelphia Law Department
1101 Market Street, 9th Floor
Philadelphia PA 19107-2997

R. King, AMS Dir C&E
N. Glazer, Reg Svcs Prog Mgr
T. Elliott, Asst Dir Eng.
T. Weir, T Huynh, R. Scott - Staff Engineers

CITY OF PHILADELPHIA - DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL PROTECTION DIVISION - AIR MANAGEMENT SERVICES
LICENSE (PERMIT) TO OPERATE EQUIPMENT VENTING INTO ATMOSPHERE

Effective Date: September 21, 1994.

Pursuant to Section 3-306(2)(c) of the Air Management Code, this License to Operate (permit) shall be renewed annually at a time established by the Department of Licenses and Inspections. The permit shall not be renewed where the installation is in violation of Title 3, Air Management Code, unless it is in compliance with an improvement plan approved under the Code. Separate "Installation Permits" are used for equipment changes.

Plant: Anzon, Inc. 2545 Aramingo Ave., Phila., Pa. 19125

Contact: William Duffin, Administration Manager

Telephone: 215-427-3000 **Facsimile:** 215-427-6947

SIC: 2819 Chemicals and Allied Products, Industrial Inorganic Chemicals, NEC (Not elsewhere classified). The primary uses of the products are as stabilizers and fillers for plastics.

Raw Materials: Acetic, phosphoric, stearic and sulfuric acids; lead and lead monoxide; phthalic anhydride; and other materials.

Product: Lead monoxide, dibasic lead phthalate, dibasic lead phosphite, normal lead stearate, dibasic lead stearate, tribasic lead sulfate (and other lead and non-lead products).

Principal Lead Processes:**

SCC	#	Equipment	Function	Controls
30103506	4	Pot furnaces	Pb oxidizing	*
30103599	3	Vacuum cleaners	Dust control	*
30103554	6	Packers	Packaging	*
30103554	4	Loaders	Charging	*
30103554	1	Unloader	Discharge	*
30103552	2	Mills	Grinding	*
30103553	2	Mill dryers	Reactor/dryer	*
50300830		Compactor and three (3) Dumps.		

* Controls are double baghouse or baghouse plus High Efficiency Particle Arrestors (HEPA) for equipment which vents outside. The compactor and dump have internal vents.

**Source Classification Codes (SCCs) for pigments, selected here, match Anzon's equipment. Anzon produces fillers, not pigments, but SCCs for non-pigment groups are not sufficiently descriptive.

Severability

The paragraphs and requirements of this permit are severable. Should any part be found to be invalid or unenforceable, the remainder shall continue in full force and effect.

Process Changes and Permit Revisions

This permit may be modified, revoked, reopened, reissued or terminated for cause. Changes which impact on allowed emission rates or which materially alter dispersion properties, based on AMS or EPA review, may cause Anzon's lead SIP to be revised.

Air permits in Philadelphia are affected by the following references, among others. Under Philadelphia Air Management Code Section 3-306(1)(a), "No person shall build ... any article, machine... the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants, until an air management permit has been obtained for such installation and construction." Under Regulation I Section II A.5.b of the Philadelphia Air Pollution Control Board, "No person shall change any installation such that the registered information concerning it is no longer accurate without first notifying the Department." Under Regulation I Section II A.4.b, "Where regulations are amended or new regulations adopted, the holders of permits and licenses issued prior to the effective date thereof shall comply with any new requirements within the period of time provided therein."

Prompt Reporting of Deviations

Anzon shall report deviations from this permit within twenty-four hours of their occurrence. "Deviations" means any change in the reported operation or its status, under requirements of the air permit and regulations. Reportable events include, but are not limited to, missing panels or windows not replaced in accordance with the maintenance plan approved by AMS, changes in baghouse filter efficiency due to filter construction or fabric, process changes which may alter air emission rates as determined for the lead dispersion model as well as the permit application reasons listed in Process Changes and Permit Revisions above. Written confirmation of a deviation shall include corrective measures.

Deviations also include excesses of emission limits and non-conformance with the federal and state clean air acts or the Philadelphia Air Management Code, regulations promulgated thereunder, plan approvals, permits or orders of the Department. Deviations during maintenance are reportable for this permit.

Future Requirements

Anzon is hereby notified that future federal requirements taking effect during the term of this permit may cause this permit to be reopened to incorporate the new requirements. Under Philadelphia Air Management Code Section 3-306(1)(a) and Regulation I Section II A.5.b of the Philadelphia Air Pollution Control Board (APCB), changes to installations which impact upon air emission rates are reportable to the Department and may be subject to permits. Regulation I Section II A.4.b also states "Where regulations are amended or new regulations adopted, the holders of permits and licenses issued prior to the effective date thereof shall comply with any new requirements within the period of time provided therein."

Federal Enforceability

This permit shall remain enforceable by the U.S. EPA as to lead emission sources as part of the Pennsylvania SIP, as to requirements generally applied by EPA, not withstanding the expiration date of this permit. Inspection authority, including the requiring of information and reports, the taking of samples, and the performance of tests, as necessary, to determine compliance with the Philadelphia Air Management Code and regulations adopted under it is cited in Section 3-304 of the Code. The section also authorizes entry for examination at all reasonable times, as provided by law.

Source:

Anzon manufactures heat stabilizers for plastics and assorted lead based chemicals. Raw materials in the form of bulk and packaged metallic lead and lead chemicals are transferred within the facility by fork lift, pumps, air conveyance and conveyors. Pig lead is melted and oxidized to form lead monoxide in the Barton pot furnaces. Other forms of lead are processed by blending, mixing, reacting and drying.

Emission controls on operating lead process sources of air emissions at Anzon consist of baghouses and, in most cases, secondary high efficiency filters. The status of the filters are monitored continuously by particle detectors with alarms.

Emission Limit Background

Lead controls keep particulate emissions at Anzon to a small fraction of the particulate regulations. Allowable limits for all particulate regulations were not computed for this reason.

Opacity limits of 20% or 60% contained in Regulation II of the Philadelphia Air Pollution Control Board and in past permits or licenses for Anzon are inadequate for any lead emitting stacks in this permit and for lead SIP enforcement. Non-lead combustion sources retain existing three (3) minute and maximum any time limits under state and local regulations in this permit. The Department intends that Anzon will bear the sampling, analysis and other reasonable costs of demonstrating that sources are non-lead where Anzon seeks exemption from the lead source requirements for an alleged non-lead source.

Emission Limits

1. Process emission limits are summarized in Table 1. Appendix A list the references for the emission limit calculations. The lower of the computed or table rate would apply if an unusual low air flow or process materials rate results in a calculated regulation limit which is lower than the Table 1 limit.

2. Anzon shall at all times operate and maintain the processes and controls at the plant in a manner consistent with good air pollution control practice for minimizing stack emissions and fugitive emissions of lead and other pollutants to the atmosphere to the maximum extent practicable.

a. For the purpose of this permit, the Department intends to apply the opacity emissions test in Paragraph 3, below, to measure compliance for lead emitting stacks, notwithstanding any regulatory mass emission limits. An average of one per cent (1%) or higher opacity will be interpreted as a excess of the stack test emission rates. Pursuant to 25 PA. Pursuant to 25 PA 123.1(a)(9), the Department may review applications for exceptions where a fugitive emission source is minor and where attainment or maintenance of a NAAQS is not compromised subject to the conditions of Process Changes and Permit Revisions section of this permit. An exception shall first apply at least reasonably available control measures, as stipulated in 25 PA 123.1. Applications for exceptions shall also document the analysis of alternative controls and processes which might eliminate the need for an exception.

b. Emissions of non-lead particulate from the stacks of the Barton Pots, furnaces or other processes burning oil or gas will be governed by the established limits of Regulation II, Section IV of the Philadelphia Air Pollution Control Board if such emissions derive solely from the combustion process. The limits are twenty (20%) per cent opacity for three (3) minutes in any one hour and sixty (60%) per cent opacity for any period.

3. For observing opacities of less than twenty per cent (20%), from stacks only, the observer shall use the rounded six minute average opacity method described in the U.S. EPA document Lead-Acid Battery Manufacture-Background Information for Promulgated Standards (EPA-450/3-79-028b, Nov. 80). Copies of pertinent pages (2-8, 2-26) are in Appendix D of this permit. The observer determines each opacity within five per cent (5%) and the six (6) minute average opacity, consisting of twenty-four observations, is rounded to the nearest whole number. This observation procedure shall not apply to opacities of 20% or more for which existing code and regulation limits for opacity apply. Existing Philadelphia rules determine a total period of excess emission or compare the observation with a maximum limit which is not to be exceeded at any time and such rules remain in effect.

4. Fugitive emissions are governed differently than stack emissions by applying 25 PA 123.1 and Philadelphia's Regulation II Section VIII. This permit requires that there be no fugitive emissions into the outdoor atmosphere from sources other than those listed under section 123.1 or determined by the Department to be of minor significance. The Department would consider that, among other things, minor significance would require the source to not interfere with the attainment or maintenance of NAAQS, not impact areas outside of Anzon's property in excess of the Philadelphia Regulation VI annual average guideline concentration for toxic materials, not exceed other applicable toxics standards and not create a nuisance. For sources in the list in 25 PA 123.1, then 25 PA 123.1 (c) requires all reasonable actions to prevent particulate matter from becoming airborne. Examples of reasonable actions are listed in the regulation.

5. The lead emission limits stated in this section and in Table 1 shall not be differentiated in terms of emissions during start-ups as opposed to emissions during normal or steady-state operations. Regulations of the Philadelphia Air Pollution Control Board and those of Pennsylvania, unlike federal Standards of Performance for New Stationary Sources (NSPS), do not differentiate start-ups or other transient conditions with respect to allowable emissions. Non-lead combustion sources only are governed by the three (3) minute and maximum any time limits of state and local regulations.

Table 1 - Point (Stack) Sources Lead Emission Limits

Lead (Pb):			
Area/ID	**Site**	**Lb/Hr**	**Ton/Yr**
DC-K1	Compactor	0.0038	0.016
DC-V1	Vac. Cleaning System #1	0.0038	0.016
DC-01	Barton Pot 1	0.0058	0.025
DC-02	Barton Pot 2	0.0058	0.025
DC-03	Barton Pot 3	0.0058	0.025
DC-04	Barton Pot 4	0.0058	0.025
DC-05	#9 Packer	0.0054	0.024
DC-06	#10 Packer	0.0054	0.024
DC-08	Bulk Loader	0.0054	0.024
DC-V2	Vac. Cleaning System #2	0.0054	0.024
DC-09	Mech. Furnace Load	0.0121	0.053
DC-010	Mech. Furnace Unload	0.0081	0.035
DC-011	#11 Oxide Mill	0.0069	0.030
DC-012	#11 Oxide Packer	0.0054	0.024
DC-013	#12 Oxide Mill	0.0069	0.030
DC-014	#12 Oxide Packer	0.0054	0.024
DC-015	#1 Dump	0.0054	0.024

Table 1(Continued)-Point (Stack) Sources Lead Emission Limits

Lead (Pb):

Area/ID	Site	Lb/Hr	Ton/Yr
DC-016	#2 Dump	0.0054	0.024
DC-1L1	#1 Mill Dryer (Reactor)	0.0088	0.039
DC-1L11	#1 Reactor Vacuum Vent	0.0005	0.002
DC-1L2	#1 Hygiene DC	0.0051	0.022
DC-L6	Storage Bin Vents	0.0025	0.011
DC-2L1	#2 Mill Dryer (Reactor)	0.0088	0.039
DC-2L2	#2 Reactor Vacuum Vent	0.0005	0.002
DC-2L3	#2 Hygiene DC	0.0051	0.022
DC-B1	Blending	0.0044	0.019
DC-B2	Blend Packing	0.0099	0.043
DC-S2	Strand Packing	0.0025	0.011
DC-1L9	Lead Oxide Silo Vent	0.0015	0.007
DC-1L12	Supersack Dump	0.0012	0.005
DC-1L13	Vac. Cleaning System #3	0.0030	0.013
DC-C3	Cent Blndr #2 Hppr(b)	0.0038	0.016
DC-C4	Cent Blndr #3A Hppr(b)	0.0038	0.016
DC-C5	Cent Blndr #3B Hppr(b)	0.0038	0.016
DC-C6	#19 Hopper(b)	0.0047	0.021
DC-C7	#19 Packer 1(b)	0.0038	0.016
DC-C9	#19 Packer 3(b)	0.0038	0.016
DC-S1	Strander #30 Pkr(b)	0.0038	0.016
DC-112	#11 Blender(b)	0.0010	0.004
DC-111	#11 Packer(b)	0.0038	0.016
DC-151	#15 Blender(b)	0.0010	0.004
DC-S1-N	Strand Main Hyg.	0.0025	0.011
DC-S3	Witte De-duster	0.0044	0.019
DC-S4	Witte Cooler	0.0044	0.019
DC-161	#16 Hopper	0.0038	0.017
DC-162	#15/16 Packer	0.0038	0.017
DC-C1	Cent. Blend Wgh Hopper	0.0038	0.017
DC-A1	Aljet Dryer	0.0033	0.014
DC-A2	Aljet Packer	0.0043	0.019

Particulate:

The emission limit for particulate matter pursuant to 25 PA 123.13(b)(1)(i) is 0.04 gr/dscf. No additional limit to total particulate is intended by the Department for the purposes of this permit except for opacity caused by combustion smoke only.

8

Background For Operating Requirements

Anzon's emission are ordinarily from stacks and not from fugitive losses. The emission rates are limited by the pound per hour or concentration limits established during the installation permit process. Additional fugitive emissions which might be related to increased production rates are not significant at Anzon. The Department, therefore, has not specifically limited Anzon's production rates for the purpose of this permit.

1. Anzon may petition for changes to operating parameters stated in this permit. To be approvable, Anzon must demonstrate to the Department's satisfaction continued compliance with all NAAQS and increments. Emissions at the new operating rates shall not exceed the allowable hourly or total quarterly emission rates established by this permit.

2. Anzon shall operate its sources so as to maintain all parameters in the dispersion model which supports this permit.

3. No processes which are subject to Regulation I Section II A(1) or A(2) of the Philadelphia Air Pollution Control Board shall be installed or operated which were not specifically included in this permit until the Department has approved such installation or operation.

4. The processes at Anzon are permitted to operate 2208 hours per quarter, i.e. full time.

Permit References

The September 15,1993 memorandum from Anzon's consultant to the Department summarizes the calculations and test reports used to compute lead emission rates for Anzon. A copy of the memorandum is attached to this permit as Appendix A.

Fugitive Emission Sources

By this permit the Department intends that Anzon will maintain such pollution prevention practices throughout its plant and in a continuous manner so as to contain fugitive pollutants. The Department also intends that dry sweeping be avoided. Rather, a plant-wide policy of dust containment and filtered transport and removal is preferred. Visible deposits outdoors whether inside or outside of the plant property, for example, shall be avoided and promptly removed when they occur.

1. Anzon shall minimize fugitive dusts consistent with Regulation II Section VIII of the Philadelphia Air Pollution Control Board at all times.

2. Anzon shall at all times operate and maintain materials handling operations, processes and controls at the plant in a manner so as to comply with Pennsylvania Title 25 Pa Code Section 123.1 (a) which states in part " No person may permit the emission into the outdoor atmosphere of a fugitive air contaminant from a source other than the following:..."(PA listed 9 exceptions).

The "listed" sources which are present at Anzon on a continuing basis are the uses of roads and streets and stockpiling of materials. Pennsylvania states further in "Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets". Further, although stockpiling of materials is an excluded source category, 25 Pa 123.19(c) requires ".. all reasonable actions to prevent particulate matter from becoming airborne" for the excluded sources.

3. Anzon shall notify the Department in writing twenty-one (21) days prior to construction or demolition and by telephone, on a same day basis, for land clearing.

Monitoring Requirements

1. Anzon shall conduct daily operating checks on the alarm systems for the monitors specified in Table 2.

Table 2 - Monitor Requirements

Control	Site	Monitor
Filter devices	Each lead emitting stack	Particle detector*

* Sufficiently sensitive to signal continuous particle emission increases at concentrations below which the emissions would be observable visually.

Testing Requirements

Protocols for testing when reasonably required by the Department shall be submitted thirty (30) days prior to the proposed tests. Anzon shall require the test firms to have test reports available to the Department within sixty (60) days of testing.

Methods

Compliance with emission rate limits in this permit shall be determined according to the following methods, when the Department requires compliance demonstration.

1. Particulate mass emissions shall be measured by 40 CFR 60 Appendix A Reference Method 5 and the support methods 1 through 4 or their EPA approved alternatives. The Department may require the additional Pennsylvania 0.22 micron back-half insoluble particulate measurement and analysis whenever the emissions rate is expected to be near a Pennsylvania regulation emission limit. The 0.22 micron particulate is not expected to be significant with respect to the low particle emission rate limits, based on actual tests, set for the Anzon facility.

2. Lead mass emissions shall be measured by 40 CFR 60 Appendix A Reference Methods 1-4 and 12 or their EPA approved alternatives.

ID

3. The Department intends that the opacity procedures established by this permit shall be the procedures used to monitor compliance under current conditions, but reserves the right to order further steps.

Recordkeeping Requirements

1. Anzon shall maintain the above primary and secondary filters, pressure sensors, alarms, and particle detectors, consistent with the manufacturers' specifications and recommendations.

2. Anzon shall comply with the inspection and maintenance schedules for lead processing equipment approved by Air Management Services. Copies of monthly log sheets for inspections are in Appendix C of this permit.

3. Anzon shall maintain records of such inspections and maintenance.

4. Any record which pertains to compliance with this permit shall be maintained for two years from the date of sample, measurement, instrument recording, report, or application and be made available to the Department and to EPA upon request.

5. At a minimum, Anzon shall maintain records which will clearly demonstrate its compliance status with regard to each permit condition. These records shall also document compliance with the following:

a. All monitor equipment inspections, calibration and their adjustments or other results.

b. Start-ups, shutdowns and malfunctions of lead processes, air pollution controls and their monitors.

c. Repair and maintenance records for lead processes, air pollution controls and their monitors.

Reporting Requirements

Anzon shall continue to submit monthly inspection results reports to Air Management Services in accordance with current practice applicable to lead process sources. These reports may be modified from time to time with the approval of Air Management Services.

Appendix A- References for Table 1 Allowed Emissions

The attached TRC Memo of 9/15/93 shows the emission calculations for sources included in this permit.

MEMORANDUM

DATE: September 15, 1993

TO: Robert Scott, Philadelphia AMS

FROM: Susan Eatinger, TRC

SUBJ: Lead Emission Rate Derivation at Anzon Plant
TRC Project No. 14462-T52

This memo explains the methods used in determining emission rates for all current Anzon lead emission sources. Tested emission rates were assigned to sources which were tested, as well as to sources which possess characteristics similar to the tested sources. The remaining sources' emission rates were derived using tested values as a basis and adjusting those values to reflect differences in flow rate, material lead content, and other elements. Table 1 provides a list of current Anzon lead emissions sources, along with each source's emission rate, the source test used as a basis for that emission rate, and reference for that source test.

TESTED EMISSION RATES

All tested emission rates were based on source testing completed at Anzon during either 1987 or 1989. These test results are summarized in two reports, Performance Test Report - Lead Emission Evaluation - Anzon, Incorporated - Philadelphia, Pennsylvania - Volume 1, dated December 29, 1987, and Performance Test Program - Lead Emission Evaluation - Anzon Incorporated - Philadelphia, Pennsylvania, dated November 3, 1989.

The December, 1987 testing report contains results of testing performed at the following current Anzon sources:

Barton Pot #1
#15 Blender
#15/16 Packer

Tested emission rates reported for these three sources reflect the average of two testing runs completed for each source.

Current Anzon sources included in the November, 1989 testing report are:

#11 Mill
Hygiene Dust Collector
Mill Dust Collector (#1 Mill Dryer-Reactor)

Three testing runs were done for each of these sources in January, 1989 and again in August, 1989. Emission rates measured in January at the #11 Mill and Mill Dust Collector were found to be higher than those measured in August; therefore, the more conservative January results were used for the purposes of the emissions inventory. Average test results for January were also used for the Hygiene

TRC

TABLE 1
SUMMARY OF EMISSION RATES

SOURCE NO. #	NAME AND/OR SOURCE DESCRIPTION	EMISSION RATE (lb/hr)	ORIGIN OF EMISSION RATE	REFERENCE
DC-K1	Compactor	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-V1	Vac. Cleaning System #1	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-01	Barton Pot 1	0.005800	Barton Pot #1 Source Test	TRC, 1987 Table 2-3, p. 7
DC-02	Barton Pot 2	0.005800	Barton Pot #1 Source Test	TRC, 1987 Table 2-3, p. 7
DC-03	Barton Pot 3	0.005800	Barton Pot #1 Source Test	TRC, 1987 Table 2-3, p. 7
DC-04	Barton Pot 4	0.005800	Barton Pot #1 Source Test	TRC, 1987 Table 2-3, p. 7
DC-05	#9 Packer	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-06	#10 Packer	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-08	Bulk Loader	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-V2	Vac. Cleaning System #2	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-09	Mech. Furnace Load	0.012100	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-010	Mech. Furnace Unload	0.008070	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-011	#11 Mill	0.007490	#11 Mill Source Test	TRC, 1989 Table 2-1, p. 3
DC-012	#11 Packer	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-013	#12 Mill (1)	0.007490	#11 Mill Source Test	TRC, 1989 Table 2-1, p. 3
DC-014	#12 Packer (1)	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-015	#1 Dump	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-016	#2 Dump	0.005380	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-1L1	#1 Mill Dryer (Reactor)	0.008800	Mill Dust Collector Source Test	TRC, 1989 Table 2-1, p. 3
DC-1L11	#1 Reactor Vacuum Vent	0.000500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-1L2	#1 Hygiene DC	0.005100	Hygiene Dust Collector Source Test	TRC, 1989 Table 2-1, p. 3
DC-L6	Storage Bin Vents	0.002500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
`L1	#2 Mill Dryer (Reactor)	0.008800	Mill Dust Collector Source Test	TRC, 1989 Table 2-1, p. 3
.L2	#2 Reactor Vacuum Vent	0.000500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
-2L3	#2 Hygiene DC	0.005100	Hygiene Dust Collector Source Test	TRC, 1989 Table 2-1, p. 3
DC-B1	Blending	0.004400	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-B2	Blend Packing	0.009900	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-S1-N	Strand Main Hygiene	0.002500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-S2	Strand Packing	0.002500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-S3	Witte De-duster	0.004400	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-S4	Witte Cooler	0.004400	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-1L9	Lead Oxide Silo Vent	0.001500	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-1L12	Supersack Dump	0.001200	Hygiene Dust Collector Source Test (Adjusted)	TRC, 1989 (see calculations)
DC-1L13	Vac. Cleaning System #3	0.003000	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-C3	Cent. Blend #2 Hopper (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-C4	Cent. Blend #3A Hopper (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-C5	Cent. Blend #3B Hopper (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-C6	#19 Hopper (1)	0.004700	#15/16 Packer Source Test (Adjusted)	TRC, 1987 (see calculations)
DC-C7	#19 Packer 1 (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-C9	#19 Packer 3 (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-S1	Strander/#30 Packer (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-112	#11 Blender (1)	0.001000	#15 Blender Source Test	TRC, 1987 Table 2-3, p. 7
DC-111	#11 Packer (1)	0.003760	#15/16 Packer Source Test	TRC, 1987 Table 2-3, p. 7
DC-151	#15 Blender (1)	0.001000	#15 Blender Source Test	TRC, 1987 Table 2-3, p. 7

1. These sources are not currently operating, but they will remain permitted for future use.

Dust Collector, despite the fact that August values were slightly higher, because a spill during the August testing affected those measurements.

CALCULATED EMISSION RATES

Emission rates for the remainder of sources were calculated using appropriate tested results as a basis, and adjusting these values to account for differences in flow rate, material lead content, and other elements. Fan volume flow rates associated with fan sizes and lead content values were taken from Appendix 1 of the Lead Air Emission Inventory, Anzon Incorporated Philadelphia Plant dated January 8, 1988. Emission computation methodology was obtained from this report, as well as information contained in Lead Air Emission Inventory (Revised), Anzon Incorporated Philadelphia Plant dated August 18, 1990 and other internal documentation. Each source is listed below in the same order that they appear in Table 1, with a description of the method used to derive the emission rate.

DC-05 #9 Packer

The #15/16 Packer source test average emission rate (0.00376 lb/hr) was used as a basis for this emission rate calculation. The #15/16 Packer had a material lead content of 65%, and a fan size of 4000 cfm. Adjustments for fan size differences were made only if a source's fan size exceeded 4000 cfm; if the fan size was smaller, it was conservatively assumed to be 4000 cfm.

Lead content of material at the #9 Packer was found to be 93%. The #9 Packer has a fan size less than or equal to 4000 cfm; therefore, no adjustment for fan size is needed. This results in the following equation and resulting emission rate:

(0.00376 lb/hr)(0.93/0.65) = 0.00538 lb/hr

DC-06 #10 Packer

Same as #9 Packer (DC-05)

DC-08 Bulk Loader

Same as #9 Packer (DC-05)

DC-V2 Vac. Cleaning System #2

Same as #9 Packer (DC-05)

DC-09 Mech. Furnace Load

Identical to #9 Packer (DC-05), except fan size for this source is 9000 cfm, resulting in an emission rate of:

(0.00376 lb/hr)(0.93/0.65)(9000/4000) = 0.01210 lb/hr

DC-010 Mech. Furnace Unload

Identical to #9 Packer (DC-05), except fan size for this source is 6000 cfm, resulting in an emission rate of:

(0.00376 lb/hr)(0.93/0.65)(6000/4000) = 0.00807 lb/hr

DC-011 #11 Mill

Unable to duplicate emission calculations used to derive previously reported emission rate of 0.00688 lb/hr. Therefore, an average of three test runs at #11 Mill during January, 1989 were used, yielding a more conservative emission rate of 0.0075 lb/hr.

DC-012 #11 Packer

Same as #9 Packer (DC-05).

DC-013 #12 Mill

Same as #11 Mill (DC-011).

DC-014 #12 Packer

Same as #9 Packer (DC-05).

DC-015 #1 Dump

Same as #9 Packer (DC-05).

DC-016 #2 Dump

Same as #9 Packer (DC-05).

DC-1L1 #1 Mill Dryer (Reactor)

Average of three test runs at Mill Dust Collector during January, 1989.

DC-1L11 #1 Reactor Vacuum Vent

The Hygiene Dust Collector (DC-1L2) source test average emission rate (0.0051 lb/hr) was used as a basis for this emission rate calculation. The Hygiene Dust Collector fan flow rate was measured during testing and was found to be an average of 4135 acfm. The tested value was scaled up or down depending upon the specific source's fan size.

The #1 Reactor Vacuum Vent has a fan size of 400 cfm; therefore, an adjustment for fan size is needed, resulting in:

(0.0051 lb/hr)(400/4135) = 0.0005 lb/hr

DC-1L2 #1 Hygiene Dust Collector

Average of three test runs at Hygiene Dust Collector during January, 1989.

DC-L6 Storage Bin Vents

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Storage Bin Vents is 1000 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(1000/4135) = 0.0025 lb/hr

DC-2L1 #2 Mill Dryer (Reactor)

Average of three test runs at Mill Dust Collector (DC-1L1) during January, 1989.

DC-2L2 #2 Reactor Vacuum Vent

Same as #1 Reactor Vacuum Vent (DC-1L11)

DC-2L3 #2 Hygiene DC

Average of three test runs at Hygiene Dust Collector (DC-1L2) during January, 1989.

DC-B1 Blending

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Blending is 3600 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(3600/4135) = 0.0044 lb/hr

DC-B2 Blend Packing

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Blend Packing is 8000 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(8000/4135) = 0.0099 lb/hr

DC-S1-N Strand Main Hygiene

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Strand Main Hygiene is 2000 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(2000/4135) = 0.0025 lb/hr

DC-S2 Strand Packing

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Strand Packing is 2000 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(2000/4135) = 0.0025 lb/hr

DC-S3 Witte De-duster

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Witte De-duster is 3600 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(3600/4135) = 0.0044 lb/hr

DC-S4 Witte Cooler

Same as Witte De-duster (DC-S3)

DC-1L9 Lead Oxide Silo Vent

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Lead Oxide Silo Vent is 1000 cfm, resulting in:

(0.0051 lb/hr)(1000/4135) = 0.0012 lb/hr Pb

These pounds of lead are then converted to pounds of Dythal, which is 74.4% lead.

$$\left[\frac{0.0012\ lb/hr\ Pb}{hour}\right]\left[\frac{1\ lb\ Dythal}{0.744\ lb\ Pb}\right] = 0.00166\ lb\ Dythal/hour$$

The assumption is made that Dythal is equivalent to PbO, which has a lead content of 93%. Adjusting for this lead content results in a lead emission rate of:

$$(0.00166\ lb\ PbO/hr)\left[\frac{0.93\ lb\ Pb}{1\ lb\ PbO}\right] = 0.0015\ lb\ Pb/hr$$

DC-1L12 Supersack Dump

Identical to #1 Reactor Vacuum Vent (DC-1L11), except fan size for Supersack Dump is 1000 cfm, resulting in an emission rate of:

(0.0051 lb/hr)(1000/4135) = 0.0012 lb/hr

DC-1L13 Vacuum Cleaning System #3

Identical to #9 Packer (DC-05), except fan size for Vacuum Cleaning System #3 is estimated to be 3200 cfm, resulting in an emission rate of:

(0.00376 lb/hr)(3200/4000) = 0.00300 lb/hr

DC-C3 Central Blend #2 Hopper

Average of two test runs at #15/16 Packer in 1987.

DC-C4 Central Blend #3A Hopper

Same as Central Blend #2 Hopper (DC-C3).

DC-C5 Central Blend #3B Hopper

Same as Central Blend #2 Hopper (DC-C3).

DC-C6 #19 Hopper

Identical to #9 Packer (DC-05), except fan size for #19 Hopper is 5000 cfm, resulting in:

(0.00376 lb/hr)(5000/4000) = 0.0047 lb/hr

DC-C7 #19 Packer 1

Same as Central Blend #2 Hopper (DC-C3).

DC-C9 #19 Packer 3

Same as Central Blend #3 Hopper (DC-C3).

DC-S1 Strander/#30 Packer

Same as Central Blend #3 Hopper (DC-C3).

DC-112 #11 Blender

Average of two test runs at #15 Blender (DC-151) during 1987.

DC-111 #11 Packer

Same as Central Blend #3 Hopper (DC-C3).

DC-151 #15 Blender

Average of two test runs at #15 Blender during 1987.

Appendix B

Federal, State, Philadelphia Allowed Emission Regulations

Anzon: Miscellaneous Allowable Emissions

Pollutant - Carbon Monoxide

Pennsylvania- There are no source regulations for carbon monoxide for Pa. Under 127.63(3), CO sources with maximum allowed emissions greater than 50 TPY, 1000 Lb/day or 100 Lb/hr may be subject to special permits depending on where and how much they impact. Anzon is not currently affected by any Pa regulation for CO.

Philadelphia- There are no significant CO sources at Anzon.

Pollutant - Nitrogen Oxides

Pennsylvania- The only source emission limit for nitrogen oxides applies to nitric acid plants. Under 123.51, combustion units rated at 250 MMBTU or more and having annual average capacity factors of greater than 30% must be equipped with continuous emission monitors for nitrogen oxides. Anzon is not currently affected by any Pa regulation for NOx.

.adelphia- Reg. VII, Section II affects fuel burning of 250 MMBTU or more. Gaseous and .iquid/solid fuels are limited to 0.20 & 0.30 Lb NOx/MMBTU heat input maximum two hour average. Nitric acid plants, in Section III, are limit to 3 Lb NOx/ton of acid produced. No Philadelphia NOx regulations affect Anzon.

Pollutant - Lead

All Rules - Pennsylvania, Philadelphia and the U.S. EPA have not established specific lead (Pb) emission limits for the equipment at Anzon. The lead SIP revision required by the notice to Pennsylvania's Governor in July 1992 applies to all sources of lead at Anzon.

Pollutant - VOC

All Rules - Pennsylvania, Philadelphia and the U.S. EPA have not established VOC emission limits applicable to Anzon. VOC emissions at Anzon are from fuel combustion.

Appendix C

Baghouse Inspection Logs

ANZON INC.

MONTHLY COMPLIANCE REPORT FOR _____ 19____

SYSTEM	HRS.	DUST COLL.	DC#	INSP. SCHED.	LAST CHECKED	MAINT. DONE	NOTI
RTON POTS		#1 BARTON	DC-01	MONTHLY			
		#2 BARTON	DC-02	MONTHLY			
		#3 BARTON	DC-03	MONTHLY			
		#4 BARTON	DC-04	MONTHLY			
		#9 PACKER	DC-05	6 MONTHS			
		#10 PACKER	DC-06	6 MONTHS			
		TRANSFER	DC-07	6 MONTHS			
		BULK LOADER	DC-08	6 MONTHS			
FURNACES		CHARGING	DC-09	6 MONTHS			
		DISCHARGING	DC-10	6 MONTHS			
		#11 MILL	DC-11	6 MONTHS			
		#11 PACKER	DC-12	6 MONTHS			
		#12 MILL	DC-13	6 MONTHS			
		#12 PACKER	DC-14	6 MONTHS			
		#2 DUMP	DC-15	6 MONTHS			
		#3 DUMP	DC-16	6 MONTHS			
		#7 MILL	DC-17	6 MONTHS			
OXIDE GENERAL		STROUD MILL	DC-18	6 MONTHS			
		VACUUM CLNR	DC-V2	6 MONTHS			
FANS, ROOF		42 BLDG.	N/A	DAILY			
#1 SYSTEM		PACKER	DC-111	6 MONTHS			
		BLENDER	DC-112	6 MONTHS			
15 BLENDER		BLENDER	DC-151	6 MONTHS			
5 BLDG		VACUUM CLNR.	DC-V1	6 MONTHS			

ANZON INC.

MONTHLY COMPLIANCE REPORT FOR _____ 19____

SYSTEM	HRS.	DUST COLL.	DC#	INSP. SCHED	LAST CHECKED	MAINT. DONE	NOTES
#1 LITTLEFORD		REACTOR	L-11	MONTHLY			
		MILL PRIMARY	N-14	MONTHLY			
		MILL SECONDARY	P-14	MONTHLY			
		41 PACKER	CC-1	MONTHLY			
		SILO VENT	1F1	MONTHLY			
#2 LITTLEFORD		REACTOR	B-11	MONTHLY			
		MILL PRIMARY	N-15	MONTHLY			
		MILL SECONDARY	P-15	MONTHLY			
		42 PACKER	H-1	MONTHLY			
		SILO VENT	2F1	MONTHLY			
LDG. ENDING		ACCUFEEDS	V-1	MONTHLY			
		R-1 HOPPER	3F1	MONTHLY			
		CC6 BLENDER	1P6	MONTHLY			
		DD6 BLENDER	2P6	MONTHLY			
		6A HOPPER	3P6	MONTHLY			
		43-44-45 PACKERS	X-6	MONTHLY			
4 BLDG. TRANDER		EE6 BLENDER	Q-6	MONTHLY			
		H61 HOPPER	U-6	MONTHLY			
		FLOOR WITTE	2G7	MONTHLY			
		TRANSFER HYGIENE	D-7	MONTHLY			
		UPPER WITTE	1G7	MONTHLY			
		BOX PACKER	R-7	MONTHLY			
		SS PACKER	2R7	MONTHLY			

ANZON INC.

MONTHLY COMPLIANCE REPORT FOR. _____ 19____

SYSTEM	HRS.	DUST COLL.	DC#	INSP. SCHED.	LAST CHECKED	MAINT. DONE	NOTES
4 BLDG.		CENTRAL VAC.	CV-3	MONTHLY			
44 BLDG. RAW MATERALS		#1 SILO	3J3	MONTHLY			
		#2 SILO	E-2	MONTHLY			
		#3 SILO	O-4	MONTHLY			
		#4 SILO	U-4	MONTHLY			
		#5 SILO	1J3	MONTHLY			
42 BLDG.		SS DUMP	F-8	MONTHLY			
31 BLDG.		NEW LAB	LB1	MONTHLY			
SHIPPING		VAC. CLEANER	V-4	MONTHLY			
40 BLDG.		TRASH COMPCTR	TC2	MONTHLY			
BLDG. ANDER		X1 & X2 PKRS	E-1	MONTHLY			
		X3 PACKER	E-2	MONTHLY			

Revised November, 1993-WTM

26

Appendix D

Reference Method for Opacity Less Than 20%

United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park NC 27711

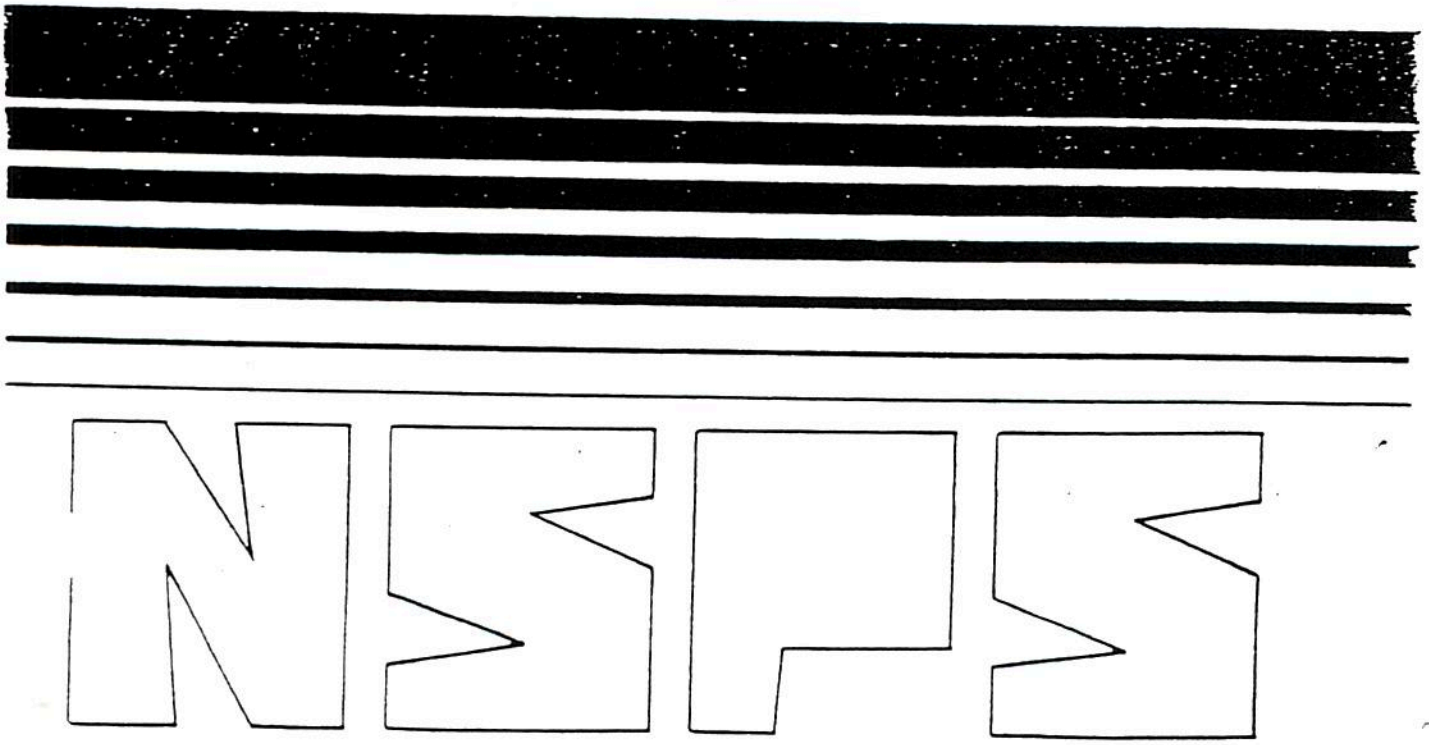
EPA-450/3-79-028b
November 1980

Air

A

Lead-Acid Battery Manufacture - Background Information for Promulgated Standards

EIS



28

filter cleaning phases. Also, under the promulgated standards, compliance with the opacity standard is to be determined by taking the average opacity over a 6-minute period, according to EPA Test Method 9, and rounding the average to the nearest whole percentage. The rounding procedure is specified in order to allow occasional brief emissions with opacities greater than 0 percent, which may occur during fabric filter cleaning.

A standard of 0 percent opacity was also proposed for lead reclamation facilities. Emissions with opacities greater than 0 percent were observed from the lead reclamation facility tested by EPA, which was controlled by an impingement scrubber. However, because the proposed emission limit for lead reclamation was based on transfer of fabric filtration technology, the 0 percent opacity standard was considered reasonable. As noted in Section 2.2 of this chapter, the final emission limit for lead reclamation is based on the demonstrated emission reduction capabilities of the impingement scrubber system tested by EPA. Therefore, the opacity standard for lead reclamation has also been changed. The final opacity standard is 5 percent, based on observations at the facility tested by EPA. Emissions from this facility e observed for 3 hours and 22 minutes, and, during this period, emissions anging from 5 to 20 percent opacity were observed for a total of about 11 minutes. The highest 6-minute average opacity during the 3 hour and 22 minute observation period was 4.8 percent. Therefore, the 5 percent opacity standard for lead reclamation is considered reasonable.

Under the general provisions applicable to all new source performance standards (40 CFR 60.11), an operator of an affected facility may request the Administrator to determine the opacity of emissions from the affected facility during the initial performance test. If the Administrator finds that an affected facility is in compliance with the applicable standards for which performance tests are conducted, but fails to meet an applicable opacity standard, the operator of the facility may petition the Administrator to make an appropriate adjustment to the opacity standard for the facility.

Comment: Some commenters stated that EPA should established a elationship between opacity and emissions before setting opacity standards.

minimum sampling time has been changed from 180 minutes, in the proposed regulation, to 60 minutes, in the promulgated action. The change reflects a alteration in the standard for grid casting.

2.7.2 Reference Method 9

Comment: Two commenters expressed concern that Method 9 is not accurate enough to be used to enforce a standard of 0 percent opacity. One commenter stated that it is difficult to discern the difference between 0 percent opacity and 1 percent opacity for a given reading.

Response: No single reading is made to the nearest percent, rather, readings are to be recorded in increments of 5 percent opacity and averaged over a period of 6 minutes (24 readings). For the regulation for lead-acid battery manufacture, the 6 minute average opacity figure is to be rounded to the nearest whole number. The opacity standard for lead-acid battery manufacture is based on opacity data taken for operating facilities, and these data have shown that this standard can be met (Section 2.1 of this chapter).

2.8 REPORTING AND RECORDKEEPING

Comment: A number of commenters contended that the proposed pressure monitoring and recording requirement for control systems would not serve to insure proper operation and maintenance of fabric filters. The commenters pointed out that a leak in a fabric filter would not result in a measurable difference in the pressure drop across the filter. One commenter suggested that the pressure drop monitoring requirement be replaced by an opacity monitoring requirement. Another commenter suggested that the pressure drop requirement be replaced by a requirement of visible inspection of bags for leaks.

Response: Based on the arguments presented by these commenters, it is agreed that proposed pressure monitoring requirement for fabric filters would not serve its intended purpose. Therefore, this requirement has been eliminated. However, pressure drop is considered to be a good indicator of proper operation and maintenance for scrubbers. Therefore, the pressure drop monitoring and recording requirement for scrubbers has been retained.

mine compliance according to § 60.8 as follows:

(1) Method 12 for the measurement of lead concentrations,

(2) Method 1 for sample and velocity traverses,

(3) Method 2 for velocity and volumetric flow rate, and

(4) Method 4 for stack gas moisture.

(b) For Method 12, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/h (0.53 dscf/min), except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Administrator.

(c) When different operations in a three-process operation facility are ducted to separate control devices, the lead emission concentration from the facility shall be determined using the equation:

$$C_{Pb_T} = \sum_{a=1}^{N} (C_{Pb_a} Q_{sd_a} / Q_{sd_T})$$

Where:

C_{Pb_T} = is the facility emission concentration for the entire facility.

N = is the number of control devices to which separate operations in the facility are ducted.

C_{Pb_a} = is the emission concentration from each control device.

Q_{sd_a} = is the dry standards volumetric flow rate of the effluent gas stream from each control device.

Q_{sd_T} = is the total dry standard volumetric flow rate from all of the control devices.

(d) For lead oxide manufacturing facilities, the average lead feed rate to a facility, expressed in kilograms per hour, shall be determined for each test run as follows:

(1) Calculate the total amount of lead charged to the facility during the run by multiplying the number of lead pigs (ingots) charged during the run by the average mass of a pig in kilograms or by another suitable method.

(2) Divide the total amount of lead charged to the facility during the run by the dura[illegible] the run in hours.

(e) Lead [illegible] from lead oxide manufactu[illegible]les expressed [illegible] charged, shall be determined using the following equation:

$$E_{Pb} = C_{Pb} Q_{sd} / F$$

Where:

E_{Pb} = is the lead emission rate from the facility in milligrams per kilogram of lead charged.

C_{Pb} = is the concentration of lead in the exhaust stream in milligrams per dry standard cubic meter as determined according to paragraph (a)(1) of this section.

Q_{sd} = is the dry standard volumetric flow rate in dry standard cubic meters per hour as determined according to paragraph (a)(3) of this section.

F = is the lead feed rate to the facility in kilograms per hour as determined according to paragraph (d) of this section.

Subpart LL—Standards of Performance for Metallic Mineral Processing plants

Source: 49 FR 6464, Feb. 21, 1984, unless otherwise noted.

§ 60.380 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in metallic mineral processing plants: Each crusher and screen in open-pit mines; each crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, and railcar unloading station at the mill or concentrator with the following exceptions. All facilities located in underground mines are exempted from the provisions of this subpart. At uranium ore processing plants, all facilities subsequent to and including the beneficiation of uranium ore are exempted from the provisions of this subpart.

(b) An affected facility under paragraph (a) of this section that commences construction or modification after August 24, 1982, is subject to the requirements of this part.

§ 60.381 Definitions.

shall have the meaning given them in the Act and in Subpart A of this part.

"*Bucket elevator*" means a conveying device for metallic minerals consisting of a head and foot assembly that supports and drives an endless single or double strand chain or belt to which buckets are attached.

"*Capture system*" means the equipment used to capture and transport particulate matter generated by one or more affected facilities to a control device.

"*Control device*" means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a metallic mineral processing plant.

"*Conveyor belt transfer point*" means a point in the conveying operation where the metallic mineral or metallic mineral concentrate is transferred to or from a conveyor belt except where the metallic mineral is being transferred to a stockpile.

"*Crusher*" means a machine used to crush any metallic mineral and includes feeders or conveyors located immediately below the crushing surface. Crushers include, but are not limited to, the following types: jaw, gyratory, cone, and hammermill.

"*Enclosed storage area*" means any area covered by a roof under which metallic minerals are stored prior to further processing or loading.

"*Metallic mineral concentrate*" means a material containing metallic compounds in concentrations higher than naturally occurring in ore but requiring additional processing if pure metal is to be isolated. A metallic mineral concentrate contains at least one of the following metals in any of its oxidation states and at a concentration that contributes to the concentrate's commercial value: Aluminum, copper, gold, iron, lead, molybdenum, silver, titanium, tungsten, uranium, zinc, and zirconium. This definition shall not be construed as requiring that material containing metallic compounds be refined to a pure metal in order for the material to be considered

that produces metallic mineral c[illegible] trates from ore. Metallic minera[illegible] essing commences with the mi[illegible] ore and includes all operations up to and including the loading or dry concentrates or solutions tallic minerals for transfer to fa[illegible] at non-adjacent locations tha[illegible] subsequently process metallic c[illegible] trates into purified metals (or products), or up to and includi[illegible] material transfer and storage ations that precede the oper[illegible] that produce refined metals (or products) from metallic minera[illegible] centrates at facilities adjacent t[illegible] metallic mineral processing plant[illegible] definition shall not be construed quiring that mining of ore be co[illegible] ed in order for the combinati[illegible] equipment to be considered a m[illegible] mineral processing plant. (See als[illegible] definition of "metallic mineral co[illegible] trate.")

"*Process fugitive emissions*" m[illegible] particulate matter emissions fro[illegible] affected facility that are not coll[illegible] by a capture system.

"*Product packaging station*" m[illegible] the equipment used to fill conta[illegible] with metallic compounds or me[illegible] mineral concentrates.

"*Railcar loading station*" m[illegible] that portion of a metallic mi[illegible] processing plant where metallic m[illegible] als or metallic mineral concentr[illegible] are loaded by a conveying system railcars.

"*Railcar unloading station*" m[illegible] that portion of a metallic mi[illegible] processing plant where metallic o[illegible] unloaded from a railcar into a hop[illegible] screen, or crusher.

"*Screen*" means a device for sepa[illegible] ing material according to size by p[illegible] ing undersize material through on[illegible] more mesh surfaces (screens) in se[illegible] and retaining oversize material on mesh surfaces (screens).

"*Stack emissions*" means the par[illegible] ulate matter captured and release[illegible] the atmosphe[illegible] ough a stack, ch[illegible] ney, or flue.

"*Storage bi*[illegible] a facility

...proved by ... e of Management
...d Budget un... ...l number 2060-
...39)

...) FR 18080, Apr. 26, 1984, as amended at
...FR 4773, Feb. 17, 1987]

...0.311 Test methods and procedures.

(a) Reference methods in Appendix
of this part, except as provided
...der § 60.8(b), shall be used to deter-
...ine compliance with § 60.342(a) as
...llows:

(1) Method 1 for sample and velocity
...averses;

(2) Method 2 for velocity and volu-
...etric flow rate;

(3) Method 3 for gas analysis;

(4) Method 4 for stack gas moisture;

(5) Method 5 or 5D for the measure-
...ent of particulate matter; and

(6) Method 9 for visible emissions.

(b) For Method 5 or 5D, the sam-
...ling time for each run shall be at
...ast 60 minutes, and the sampling
...te shall be at least 0.85 std m³/h, dry
...sis (0.53 dscf/min), except that
...orter sampling times, when necessi-
...ted by process variables or other fac-
...rs, may be approved by the Adminis-
...ator.

(c) Visible emission observations of a
...ntrol device with a multiple stack
...haust or a roof monitor shall occur
...ring normal operation of the rotary
...ne kiln, at least once per day of oper-
...ion. For at least three 6-minute peri-
...s, the opacity shall be recorded for
...y point(s) where visible emissions
...e observed, and the corresponding
...ed rate of the kiln shall also be re-
...rded. These observations shall be
...ken in accordance with Method 9.
...ecords shall be maintained of any 6-
...inute average that is in excess of the
...issions limit specified in § 60.342(a)
...this subpart.

...pproved by the Office of Management
...d Budget under control number 2060-
...0.)

...FR 18080, Apr. 26, 1984, as amended at
...FR 4771, Feb. 17, 1987]

Source: 47 FR 16573, Apr. 16, 1982, unless otherwise noted.

§ 60.370 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the affected facilities listed in paragraph (b) of this section at any lead-acid battery manufacturing plant that produces or has the design capacity to produce in one day (24 hours) batteries containing an amount of lead equal to or greater than 5.9 Mg (6.5 tons).

(b) The provisions of this subpart are applicable to the following affected facilities used in the manufacture of lead-acid storage batteries:

(1) Grid casting facility.

(2) Paste mixing facility.

(3) Three-process operation facility.

(4) Lead oxide manufacturing facility.

(5) Lead reclamation facility.

(6) Other lead-emitting operations.

(c) Any facility under paragraph (b) of this section the construction or modification of which is commenced after January 14, 1980, is subject to the requirements of this subpart.

§ 60.371 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

(a) "Grid casting facility" means the facility which includes all lead melting pots and machines used for casting the grid used in battery manufacturing.

(b) "Lead-acid battery manufacturing plant" means any plant that produces a storage battery using lead and lead compounds for the plates and sulfuric acid for the electrolyte.

(c) "Lead oxide manufacturing facility" means a facility that produces lead oxide from lead, including product recovery.

(d) "Lead reclamation facility" means the facility that remelts lead scrap and casts it into lead ingots for use in the battery manufacturing

...turing plant operation from which
...ad emissions are collected and
...ected to the atmosphere and which is
not part of a grid casting, lead oxide
manufacturing, lead reclamation,
paste mixing, or three-process oper-
ation facility, or a furnace affected
under Subpart L of this part.

(f) "Paste mixing facility" means the facility including lead oxide storage, conveying, weighing, metering, and charging operations; paste blending, handling, and cooling operations; and plate pasting, takeoff, cooling, and drying operations.

(g) "Three-process operation facility" means the facility including those processes involved with plate stacking, burning or strap casting, and assembly of elements into the battery case.

§ 60.372 Standards for lead.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any grid casting facility any gases that contain lead in excess of 0.40 milligram of lead per dry standard cubic meter of exhaust (0.000176 gr/dscf).

(2) From any paste mixing facility any gases that contain in excess of 1.00 milligram of lead per dry standard cubic meter of exhaust (0.00044 gr/dscf).

(3) From any three-process operation facility any gases that contain in excess of 1.00 milligram of lead per dry standard cubic meter of exhaust (0.00044 gr/dscf).

(4) From any lead oxide manufacturing facility any gases that contain in excess of 5.0 milligrams of lead per kilogram of lead feed (0.010 lb/ton).

(5) From any lead reclamation facility any gases that contain in excess of 4.50 milligrams of lead per dry standard cubic meter of exhaust (0.00108 gr/dscf).

(6) From any other lead-emitting operation any gases that contain in excess of 1.00 milligram per dry standard

...gases with greater ... percent
opacity (measured ... ing to
Method 9 and rounded to the nearest whole percentage).

(8) From any lead reclamation facility any gases with greater than 5 percent opacity (measured according to Method 9 and rounded to the nearest whole percentage).

(b) When two or more facilities at the same plant (except the lead oxide manufacturing facility) are ducted to a common control device, an equivalent standard for the total exhaust from the commonly controlled facilities shall be determined as follows:

$$S_e = \sum_{a=1}^{N} S_a (Q_{sd_a} / Q_{sd_T})$$

Where:

S_e = is the equivalent standard for the total exhaust stream.

S_a = is the actual standard for each exhaust stream ducted to the control device.

N = is the total number of exhaust streams ducted to the control device.

Q_{sd_a} = is the dry standard volumetric flow rate of the effluent gas stream from each facility ducted to the control device.

Q_{sd_T} = is the total dry standard volumetric flow rate of all effluent gas streams ducted to the control device.

§ 60.373 Monitoring of emissions and operations.

The owner or operator of any lead-acid battery manufacturing facility subject to the provisions of this subpart and controlled by a scrubbing system(s) shall install, calibrate, maintain, and operate a monitoring device(s) that measures and records the pressure drop across the scrubbing system(s) at least once every 15 minutes. The monitoring device shall have an accuracy of ±5 percent over its operating range.

§ 60.374 Test methods and procedures.

(a) Reference methods in Appendix A of this part, except as provided under § 60.8(b), shall be used to deter-

3.2