

South Coast Air Quality Management District

Statement of Basis

Proposed Renewal of Title V Permit

Facility Name:	Quemetco, Inc.
Facility ID:	8547
SIC Code:	3341
Equipment Location:	720 South 7th Ave. City of Industry, CA 91746
Application #(s):	436956
Application Submittal Date(s):	11/10/2004
Permit Revision #:	5
Revision Date:	pending
Permit Section(s) Affected:	All Sections
AQMD Contact Person:	Marco A. Polo, Air Quality Engineer II
Phone Number:	(909) 396-2633
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1. Introduction and Scope of Permit

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This permit replaces the facility's other existing permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, monitoring, recordkeeping, and reporting requirements.

The AQMD implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant. NO₂, SO₂, and lead are in attainment with federal standards. The status of CO is currently serious nonattainment, but AQMD has petitioned to EPA for redesignation to attainment status. The status for PM-10 is serious nonattainment. The status for ozone is currently severe nonattainment.

This facility was issued its initial Title V permit in May, 2000. Title V permits are required to be renewed every five years. The facility submitted an application to renew its Title V permit in November 2004. The AQMD proposed a Title V renewal in March 2005 and in response to public request, held a Public Consultation Meeting in June 2005 to provide an opportunity for further public comments and input on the proposed permit. At this time AQMD is proposing to renew the Title V permit for this facility. Therefore, a Title V permit is proposed to be issued to cover the operations of Quemetco, Inc. located at 720 South 7th Avenue, City of Industry, CA 91746. This facility is subject to Title V requirements because it is a major source, is subject to certain NSPS (New Source Performance Standards) and is subject to NESHAP (National Emission Standards for Hazardous Air Pollutants) requirements.

2. Facility Description

This is an existing facility, applying for a Title V permit renewal. This facility is a secondary lead smelter. This facility recycles lead acid batteries and lead parts. This facility is operating a battery crushing and material separation system, rotary dryer furnace, reverberatory furnace, electric slag processing furnace, refining pot-type furnaces, scrubbers, and baghouses. The metallurgical furnaces are enclosed in a building which is vented to several room ventilation baghouses equipped with High Efficiency Particulate Air (HEPA) filters.

3. Construction and Permitting History

The facility has been in constant operation since prior to 1971. Numerous permits to construct and permits to operate have been issued to the facility since 1971. An initial Title V permit was issued to the facility in 2000 and since then five facility permit revisions have been issued.

4. Regulatory Applicability Determinations

Applicable legal requirements for which this facility is required to comply are required to be identified in the Title V permit (for example, Section D, E, and H of the proposed Title V permit). Applicability determinations (i.e., determinations made by the AQMD with respect to what legal requirements apply to a specific piece of equipment, process, or operation) can be found in the Engineering Evaluations. This facility is subject to NSPS and NESHAP requirements. NSPS requirements of 40 CFR Part 60 apply to certain units at the facility and the permit terms and conditions may be found in Section D of the Title V permit. NESHAP requirements of 40 CFR Part 63 apply to certain units at the facility and the permit terms and conditions may be found in Sections D and J of the Title V permit.

5. Monitoring and Operational Requirements

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V permit (for example, Section D, F, and J and Appendix B of the proposed Title V permit). Discussion of any applicable monitoring and operational requirements can be found in the Engineering Evaluations. Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 apply to certain units at the facility and the permit terms and conditions may be found in Section D of the Title V permit.

6. Permit Features

Permit Shield

A permit shield is an optional part of a Title V permit that gives the facility an explicit protection from requirements that do not apply to the facility. A permit shield is a provision in a permit that states that compliance with the conditions of the permit shall be deemed compliance with all identified regulatory requirements. To incorporate a permit shield into the Title V permit involves submission of applications for change of conditions for each equipment affected by the permit shield. Permit shields are addressed in Rule 3004 (c). This facility has **not** applied for a permit shield.

Streamlining Requirements

Some emission units may be subject to multiple requirements which are closely related or redundant. The conditions may be streamlined to simplify the permit conditions and compliance. Emission limits, work practice standards, and monitoring, recordkeeping, and reporting requirements may be streamlined. Compliance with a streamlined condition will be deemed compliance with the underlying requirements whether or not the emission unit is actually in compliance with the specific underlying requirement. This facility has **not** applied for any streamlined conditions.

7. Summary of Emissions and Health Risks

Criteria Pollutant Emissions (tons/year) Annual Reported Emissions for Reporting Period 2002

Pollutant	Emissions (tons/year)
CO	5.378
NOx	19.840
PM	1.697
SOx	37.690
VOC	41.285

Toxic Air Contaminants Emissions (TAC) Annual Reported Emissions for Reporting Period 2002

The Following TACs Were Reported	Emissions (lbs/yr)
1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	< 0.001
1,2,3,4,6,7,8-Heptachlorodibenzofuran	< 0.001
1,2,3,4,7,8-Hexachlorodibenzofuran	< 0.001
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	< 0.001
1,2,3,7,8,9-Hexachlorodibenzofuran	< 0.001
1,2,3,7,8-Pentachlorodibenzofuran	< 0.001
1,2,4TRIMEBENZE	0.014

1,3-Butadiene	1379.633
1,4-Dioxane	674.749
2,3,4,7,8-Pentachlorodibenzofuran	< 0.001
2,3,7,8-Tetrachlorodibenzofuran	< 0.001
2-Methyl naphthalene [PAH, POM]	73.495
ACENAPHTHENE	5.612
ACENAPHTHYLENE	14.410
ANTHRACENE	0.557
Acetaldehyde	4644.906
Acrolein	0.842
Ammonia	979.456
Arsenic	62.456
B[GHI] PERYLENE	0.001
Benz[a]anthracene	0.004
Benzene	1373.952
Benzo[b]fluoranthene	0.003
Benzo[e]pyrene [PAH, POM]	0.001
Beryllium	0.024
Cadmium	23.732
Chlorodifluoromethane {Freon 22}	17.000
Chromium (VI)	0.295
Chrysene	0.028
Copper	11.220
ETHYL BENZENE	292.155
Ethylene dibromide	22.976
FLUORANTHENE	0.377
FLUORENE	6.620
Formaldehyde	8378.370
HEXANE	1.565
Hydrochloric acid	0.089
Hydrogen sulfide	0.108
Lead (inorganic)	306.294
M-XYLENE	0.004
Manganese	9.203
Mercury	38.146
Methyl chloride {Chloromethane}	108.081
Methylene chloride	296.806
Naphthalene	282.713
Nickel	22.905
PAHs, total, with components not reported	1.667
PHENANTHRENE	18.573
PYRENE	0.129
Perylene [PAH, POM]	0.001
Polychlorinated biphenyls	1.780
Selenium	71.286

Styrene	3338.502
Toluene	693.362
Vinyl chloride	24.018
Xylenes	429.932

Health Risk from Toxic Air Contaminants

The facility is subject to review by the Air Toxics Information and Assessment Act (AB2588). The preliminary Facility Health Risk was conditionally approved on October 28, 2005, with the following risk factors:

Cancer Risk	21.8 in one million
Acute Hazard Index	0.54
Chronic Hazard Index	0.19
Cancer Burden	1.15

8. Compliance History

As noted, the facility has been in constant operation since prior to 1971. The facility has been subject to both self-reporting requirements and AQMD inspections. The facility has had 59 citizen complaints filed, two Notices to Comply issued, and one Notice of Violation issued in the last two calendar years.

9. Compliance Certification

By virtue of the Title V permit application and issuance of this permit, the reporting frequency for compliance certification for the facility shall be annual.

10. Comments

The revised draft Title V permit contains enhanced monitoring conditions with regards to the quantification of process weight for the rotary dryer (Device D3) and reverberatory furnace (Device D8.)

The Engineering Evaluations describing these new changes can be found in A/N(s) 388372 and 442948. These changes were processed concurrently with the Title V permit renewal process.

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EVALUATION FOR FINAL PERMIT TO OPERATE

COMPANY NAME AND ADDRESS

Quemetco, Inc.
720 South Seventh Avenue
City of Industry, CA 91746

ID 8547
mailing and equipment address

EQUIPMENT DESCRIPTION

APPLICATION NO. 442948 (Previous A/N 388372)

ADDITION OF LOADRITE WEIGHING SYSTEM PERMIT CONDITIONS FOR:

SECONDARY LEAD-SMELTING SYSTEM CONSISTING OF:

1. CHARGING HOPPER, 3'-0"W. X 15'-7"L. X 5'-0"H.
2. BELT CONVEYOR, 10-H.P.
3. KILN FEEDER, SCREW TYPE, 3-H.P.
4. DRYER, ROTARY TYPE, 5'-0"DIA. X 31'-0"L., 25-H.P., WITH ONE BURNER, NORTH AMERICAN MODEL NO. 42-13-10-LEX, 10,000,000 BTU PER HOUR NATURAL GAS OR PROPANE FIRED, WITH OXYGEN ENRICHMENT, AND WITH A 20-H.P. COMBUSTION AIR BLOWER.
5. BELT CONVEYOR, FURNACE FEED, 5-H.P.
6. FURNACE, LEAD ACID BATTERY SCRAP, REVERBERATORY TYPE, 9'-4"W. X 30'-2"L. X 8'-7"H., WITH FOUR AMERICAN COMBUSTION, INC BURNERS, 34,000,000 BTU PER HOUR TOTAL NATURAL GAS-OR PROPANE-FIRED, WITH OXYGEN ENRICHMENT, AND WITH A 50-H.P. COMBUSTION AIR BLOWER.
7. CONVEYOR, SLAG DISCHARGING, 10-H.P., COMMON TO THE LEAD SLAG PROCESSING FURNACE.

HISTORY

A/N 388372 was received as class I on 6-29-2001 to perform an alteration to the rotary dryer furnace serving the reverberatory furnace by the replacement of the rotary dryer burner with a new burner with lower NOx emissions. The dryer tube was also subsequently replaced with a new one and the applicant is proposing to move the burner further away from the dryer tube.

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These last two changes have been covered under A/N 388372 (which is superseded by A/N 442948 and which will be cancelled upon issuance of the permit under the current application.) A/N 442948 was received as class III on 4-21-2005 for change of condition to A/N 388372 to eliminate the previously recommended method of calculating process weight (by multiplying the weight of lead metal produced by the reverb and slag furnaces with a conversion factor) and instead implementing a direct weighing system ("Loadrite")..

The following table summarizes the recent application and permit history regarding the subject permit units, beginning with the previous application which was issued a Permit to Operate in 1986, and ending with the current open permit application:

Reverberatory Furnace Permit Unit:

A/N	Appl. Date	P/O	P/O Date	Comments
115777	10/19/1983	M48777	4/7/1986	
142616	3/18/1986	cancelled	NA	superseded by A/N 180342
180342	12/20/1988	cancelled	NA	P/C 10/24/1989, superseded by A/N 262617
262617	2/14/1992	D54865	6/5/1992	Rule 441 P/C issued 3/10/1992
278983	3/5/1993	F7925	7/1/1997	P/C 7/6/1993 re-issued 7/14/1993 -- first permit with 600 tons/day process weight
352672	3/30/1999	cancelled	NA	P/C 5/28/1999, superseded by A/N 388372
388372	6/29/2001	pending	pending	P/C issued 12/7/2001
442948	4/21/2005	pending	pending	pending Title V & US EPA 45 day review period

Note: After RECLAIM program was implemented, P/O numbers were issued for internal use only.

A public consultation meeting was held on June 28, 2005, to consider comments from the public regarding the proposed changes to the Facility Permit resulting from Quemetco's Title V permit renewal application and the changes proposed under A/N's 388372 and 442948. An additional Title V public notice and possible public meeting are pending with regards specifically to the Loadrite project, due to the significance and complexity of this project. Final action will be pending after all comments received pursuant to public notice requirements under Title V and additional comments and information received during all pending meetings are evaluated.

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PROCESS DESCRIPTION

Quemetco, Inc. recycles spent lead acid batteries to recover lead metal. Metallic lead is the desired product in this operation. A waste material, lead depleted slag, is shipped offsite for proper disposal. The waste slag by-product consists mainly of metal oxides and sulfates, and silica sand which may occur in this material as metal silicates. The metals present in the waste slag are expected to be mostly unrecoverable lead, calcium, iron, sodium, and trace heavy metals. The waste slag may also contain various alkaline earth metals.

In this operation, lead acid batteries are broken into fragments and the liquid sulfuric acid is washed and/or partially neutralized. The solid fragments include process material consisting of lead, rubber, and plastic. The bulk of the plastic is separated and washed, and sold to an external buyer. The remainder of feed material are mixed along with other additives consisting mainly of calcined carbon coke, lime, iron, borax, and/or silica sand. The shredded and treated raw feed material is stored in piles to drain as much liquid out of the feed piles as possible, and then a skip loader is used to charge buckets of this material to a rotary kiln hopper. Most of the moisture is removed in the rotary kiln and the dehydrated feed mix is charged to a reverberatory furnace. The raw mixture is smelted in this furnace and two streams of molten material are produced. The first stream, lead metal, is tapped from the reverberatory furnace and poured into large molds. The second stream, molten slag, is continuously charged to an adjacent electric resistance heated slag reduction furnace.

The reverberatory furnace operates at high temperatures of about 2400 degrees F. Molten slag floats on top of the denser liquid lead metal. The slag layer insulates the molten lead from further oxidation. The reducing agents chemically react with the slag material and reduce the lead content to metallic lead, which sinks to the bottom of the slag layers. Due to the high temperature, long residence time, and oxidizing atmosphere in the reverberatory furnace chamber, most of the organic gases produced in the reverberatory furnace are destroyed. However, both the reverberatory furnace and rotary dryer emit ROG and CO with the majority of these contaminants coming from the rotary dryer. The rotary dryer is direct fired and is not designed to heat the feed to high temperatures.

PROPOSED PROCESS CHANGES

The applicant has provided comments in response to the previous draft Facility Permit currently under public review. The applicant objects to the application of the recommended "product back" factor equal to 1.429 pounds of feed charged to pounds of lead metal produced. In A/N 442948, the applicant has proposed the installation and use of a feed material weighing system consisting of "load cells" installed on several skip loaders. The load cells are devices which correlate the weight of material held in the bucket of a skip loader with the amount of hydraulic pressure needed to keep the bucket suspended in the air at a designated height. In conjunction with the implementation of the load cells, the applicant is proposing to construct a

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computer network whose purpose is to capture and record data from the load cells. Since the equipment which will be installed is not a physical modification to the feed system of the reverb furnace permit unit (which begins with the rotary dryer feed hopper), a Permit to Construct is not required for a physical modification to the furnace feeding system. Therefore, the application submitted for the load cell feed weighing equipment is being processed as an application for "change of conditions."

The applicant's proposal indicates that a load cell manufactured by "Loadrite" will be installed on four different skip loaders. The skip loaders are used to charge raw materials to the rotary dryer feed hopper. Several pieces of data will be acquired by a computer network. The first piece of data will be a weight value and time stamp generated by each Loadrite device. The data will be uploaded to a computer network either by a radio network link, or manually, by means of a flash-memory module inserted periodically into a computer work station which is in turn connected to the network. A photo-electric sensor installed in the vicinity of the feed hopper will create a second time stamp whenever the skip loader bucket interrupts a light beam. The time stamp will be acquired by the computer network. A third device (a motion detector) will work in conjunction with a digital video camera connected to a hard drive based digital video recorder which will record a video file from the video camera. The video data will be used to manually verify the true occurrence of a feed charging event.

The network will be used to gather all of the data verifying bucket charge weights and charging times. This data will ultimately be deposited into a Microsoft Excel worksheet. The worksheet will record material names, dates, times, and weights. It will also calculate the total number of buckets charged and the total weight of all materials charged.

EVALUATION/DISCUSSION

The proposed Loadrite weighing system appears to be a significant improvement over the current "production-back" calculations, as it is straight-forward, simple, and more enforceable. There were several issues with the initial proposal which were discussed with Quemetco and several issues regarding the initial proposed permit conditions which Quemetco had objected to, as indicated in Mark Vondersaar's email of 6/17/2005. These issues have been resolved as outlined in the "RECOMMNDATION" section of this evaluation while some are discussed below.

1. It appears that the motion detector associated with the video camera proposed as a data quality assurance measure in the current proposal is not designed to be solely triggered by a bucket charging event. It can be triggered simply by the motion of arbitrary objects passing in front of this camera's motion detector. While this measure does not add a

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significant level of enhancement to data quality, it will nonetheless be included in the permit conditions pursuant to Quemetco's request.

2. It is recommended that, in addition to the applicant's proposed record keeping methodology, certain additional measures be required in the permit conditions to correct problems with data security. Specifically, all hand written records produced by the equipment operators will be required to be kept. Read-only electronic image files of daily printouts also have to be archived. In addition, a circular chart recorder is required to produce a hard copy trace of the rotary dryer charging events and a non-resettable totalizing counter is also required to count the cumulative number of times that the hopper receives a feed material charge. These last two non-resettable data logging methods provide a level of data security which the District recommends in order to aid in the verification of the accuracy of the quantitative data records.
3. A discreet level of miscounts (i.e., missing data events) has been permitted to occur as indicated in the recommended permit conditions. These permit conditions are partially based on initial proposals submitted by Quemetco. The recommended conditions are more stringent than the level of miscounts Quemetco had originally proposed and they are significantly more stringent than the set of requirements Quemetco had subsequently proposed in response to the initially proposed conditions. The recommended permit conditions are based on the assumption that the feed counting and weighing system shall accurately and reliably report the charging rate to the rotary dryer hopper on a continuous basis, not on a partial basis.
4. Quemetco has proposed to use an average weight to attribute to a "missing data point", in the event that the data acquisition system fails to record the weight of a charge. The District has taken note that the average bucket weight during times of normal operation (as opposed to apparently controlled bucket weight conditions recorded during source tests) can vary widely between approximate values of 8,000 lbs/bucket on the low end, and 15,000 lbs/bucket on the high end. Since the purpose of permit conditions is to ensure compliance (e.g., that the feed limit is not exceeded), the conservative approach from a regulatory perspective would be to require a higher (15,000 lbs), rather than a lower, default bucket weight for reporting purposes. Together, all of the added measures are recommended to ensure that the feed weighing system will perform with accuracy, reliability, and with a reasonable level of data security.

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RECOMMENDATION

Approve the proposed Loadrite weighing system with the conditions recommended below, and proceed with the Title V noticing requirement and 45 day U.S. EPA review periods.

(Note: An explanation follows each condition indicating the basis for that condition.)

Revised Condition C1. 7:

The operator shall limit the material processed to no more than 600 ton(s) in any one day.

For the purpose of this condition, material processed shall be defined as the total weight of all materials charged to the reverberatory furnace. This total weight shall be the same as the total weight of all materials charged to the rotary dryer furnace. This condition shall not apply to baghouse dust generated on-site. To comply with this condition, the process weight shall be determined according to the following method.

1) The operator shall use a skip loader equipped with a Loadrite weighing system, and the hardware and software system (network) referred to as the Supervisory Control and Data Acquisition System (SCADA), to measure and record the weight of all materials charged to the rotary dryer feed hopper in accordance with all data and specifications submitted to the AQMD under Application No. 442948 unless otherwise specified below.

SCADA is the terminology proposed by Quemetco for the computer network which will be used to collect and record the feed weight data. This is the method proposed by Quemetco. The method as approved is custom made with respect to Loadrite. Other vendors or future modifications will require AQMD's review and approval through the submittal of new permit applications.

2) Except for calcined carbon coke, all feed material shall be charged to the rotary dryer and the reverberatory furnaces through the feed hopper serving the rotary dryer furnace.

Since only feed material charged to the hopper is weighed, charging to any other point in the process is prohibited in order to account for all process weight. Coke is charged onto the main dryer feed conveyor, not into the feed hopper.

3) Calcined carbon coke shall be staged in a dedicated pile prior to charging it to the main rotary dryer feed conveyor. The total amount of all carbon coke charged shall also be weighed and recorded by the Loadrite weighing system.

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A method is required for weighing the carbon coke since it is part of the total process weight.

- 4) **The SCADA shall process the information from the Loadrite weighing system and record the skip loader identification, calendar date, chronological time and process weight, in pounds, of each bucket load of material charged to the rotary dryer feed hopper and the total weight of all coke charged, respectively, as well as the total load count for each day.**

This is the minimum amount of process data needed to verify compliance with permit limits.

- 5) **A motion detection system, consisting of a photoelectric sensor, a video camera and a video motion detector, shall be installed at the rotary dryer feed hopper, and maintained in proper operation at all times, to indicate when a bucket load is charged to this hopper. The SCADA shall process the information from this system and record the chronological time of each bucket load and the total count of all loads charged to the rotary dryer feed hopper each day.**

These are secondary devices used to verify the true occurrence of a feed charging event.

- 6) **The time stamps of all devices, including the Loadrite systems, shall be synchronized with respect to the time of day and, with each other, within plus or minus 180 seconds.**

This condition is required to enable proper identification of each charging event with respect to chronological time.

- 7) **The rotary dryer feed hopper photoelectric sensor shall provide an electronic signal to a circular chart recorder which shall record one tick mark for each instance that a bucket load is charged to the hopper, and, simultaneously, to a non-resettable totalizing counter which counts the total number of loads charged. One separate circular data chart shall be produced for each day.**

The data charts will provide "tangible" output records independent of SCADA that can immediately be viewed by an inspector visiting the facility.

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8) The photoelectric sensor, circular chart recorder, and totalizing counter shall be electrically configured to be independent of the SCADA network, and maintained in operation at all times.

This system is required to operate independently of the primary digital network and is required to be *immune* from primary system failure, should this occur (computers occasionally crash and require re-booting, resulting in loss of data.) This secondary analog system acts as a "qualitative" 24 hour/day, 365 day/year, onsite "inspector" of the operation of the reverberatory furnace feed system.

9) The chart recorder, and the totalizing counter, shall be installed in the control room adjacent to the furnace area easily accessible to AQMD personnel. Each circular chart shall be clearly identified with the calendar date(s), starting time, ending time, starting totalizer count, and ending totalizer count that applies to the tick marks recorded on each chart. Each chart shall also be signed by the shift supervisor present on duty at the time that the chart paper is replaced in the recorder.

The control room is in a convenient location for inspection by AQMD personnel.

10) A manual verification of each charging event recorded by the SCADA and chart recorder shall be performed every two hours initially until otherwise approved in writing by the AQMD. Quemetco shall record the result of each verification in the comment section of the Daily Production Report (DPR) for this facility. If the number of load counts do not match, an explanation of causes and corrective actions taken (if required) shall be included in the DPR.

Quemetco will be required to clearly identify each value in computer records which was manually inserted due to missing weight data associated with any digital time stamp from a bucket charging event, or due to any unexpected anomaly.

11) If at any time, the weighing system fails to record the weight of a bucket load charged to the rotary dryer hopper, as evidenced by no weight entry associated with a time stamp or a load count inconsistent with that of the photoelectric sensor system (i.e., a missing data event), a default weight of 15,000 pounds shall be added into the record for each missed weight measurement (i.e. each charging event missing a corresponding measured weight value.)

Quemetco has proposed using average bucket density data calculated from the previous 24 hour period to use for missing data. They have also proposed a boundary limit of 4 missed readings in any one two hour period as an acceptable benchmark. Since this can be equal to a maximum error rate of approximately 50%, in terms of each missed reading, the use of average data is excessively forgiving and prone to give process weight estimates that can be underestimated by as much as 50% per bucket charged. (The lower

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end of the bucket density has been previously demonstrated during source tests to be lower than 8,000 pounds per bucket charged.) **Since the purpose of any missing data procedure is not to provide an alternative to doing business as usual, there has to be a compelling incentive to avoid routine situations which will lead to prolonged episodes of using missing data.** Therefore, the applicant's upper range of bucket densities stated in the documentation provided under this application, 15,000 pounds per bucket, should be required as the default value to be used in all cases for missing data.

Expeditious identification of data acquisition problems has to be performed in order to ensure compliance with process weight feed limits.

12) For the purpose of this condition, a false positive shall be defined as a missing data event not related to the charging of material into the rotary dryer feed hopper.

The procedure in condition 11 does not apply to erroneously triggered time stamps.

13) The default weight requirement in subpart 11 of this condition shall not apply for events where the video camera record, in conjunction with the video motion detector, clearly demonstrates that no missing data event occurred (i.e., a false positive event). In cases where the record shows that a missing data event was a false positive, Quemetco shall provide a notation in the daily log identifying the cause for the false positive.

The procedure in condition 11 does not apply to erroneously triggered time stamps. Quemetco has installed a video recorder to help identify events which are triggered by *non*-feed charging events, such as a worker breaking the light beam of the photoelectric detector when he goes to dislodge plugged material in the feed hopper with a shovel.

14) If the number of missing data events (not counting false positives) exceeds four (4) in any two (2) hour recording period, Quemetco shall cease the charging of all materials to the rotary and reverberatory furnaces until all the factors causing the missing data events have been identified and corrected.

If this condition is invoked, Quemetco has proposed to cease material feeds until the problems are corrected. To ensure that this does not happen, Quemetco has proposed the installation of Loadrite units on at least four different skip loaders. This appears to be reasonable assurance that the feed charged to the rotary dryer hopper will always be properly accounted.

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- 15) The number of missing data events (not counting false positives) shall not exceed ten (10) in any one 24 hour period.**

This condition sets a realistic limit on the total number of missing data episodes occurring in any one day. It represents approximately 8% of missed load counts or about 12% of permitted feed rate.

- 16) Quemetco shall maintain standardized test weights for calibrating the Loadrite units. Each standardized test weight shall have a mass not less than 6000 pounds, and not more than 7500 pounds. In addition, each standard test weight shall be engraved or stamped with a unique serial number and the weight value in pounds.**

This condition ensures that the standard test weights are well within the "normal range" of the bucket weight capacities routinely encountered in Quemetco's operation. The weights shall be stamped so that they can be cross-verified by a District inspector who may make an unannounced site visit and require Quemetco to verify the accuracy of the different load cells and the stated ratings of each standard weight.

- 17) The mass of each test weight shall be verified using a certified truck scale, not less than once per calendar month, and prior to the first use of the test weight. All calibrations of standard test weights shall be accompanied by truck scale weight tickets showing the tare and final weights used to assign the true weight to each standard test weight.**

The weight tickets are the only available evidence that can be verified by an inspector to ensure that the test weights are identified with the correct calibration value placed on each weight by Quemetco.

- 18) The truck scale shall have an active certification obtained from a governmental body with jurisdiction over truck scale calibrations, such as the State of California Department of Transportation.**

This condition is required to ensure that an acceptable level of accuracy is maintained in the feed weighing system and to provide verification of this accuracy.

- 19) Quemetco shall perform a calibration of each Loadrite unit in use by measuring the weight of standardized test weights at least daily at the beginning of each operation day. A total of two (2) standard test weights shall be used for each Loadrite calibration (i.e., a total bucket calibration weight of 12,000 to 15,000 lbs.)**

The maximum weight chosen in this condition is an approximation of the full scale which will be experienced in normal operation. It is important to calibrate as close to the full scale value as possible in order to ensure accuracy of calibration.

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20) The value measured for the standardized test weight by a Loadrite unit in service shall not deviate from the actual value of the standard test weight by greater than three (3) percent.

Quemetco had originally requested 5 %. However, since the permit limit is 600 tons per day, this would equate to 30 tons (60,000 pounds), a very large amount. Based on these facts, a more reasonable number would be 3 %. This should be possible since the manufacturer has indicated that the Loadrite devices are capable of better accuracy (0.2% to 1.0%.)

21) Any standard test weight which becomes damaged, broken, or physically altered in a way which can cause a weight deviation of more than 100 pounds shall be immediately removed from service as a standard until it is recalibrated using the certified truck scale.

The total mass of each standard weight is expected to vary from time to time due to normal wear and tear. Each test weight has to be verified using a practical primary standard, which in Quemetco's case is the certified truck scale located onsite.

Quemetco has proposed to manufacture the weights by casting lead metal into steel cases. Since lead is a soft solid, and therefore subject to fragmentation, the weights shall be periodically inspected for possible damage. If the calibrated mass of a test weight changes by more than 1.5 % (approximately 100 pounds), the test weight has to be recalibrated to ensure that true and accurate weight data is recorded by the data acquisition system.

22) Not later than 30 days after this condition becomes effective, Quemetco shall submit a revised written Standard Operating Procedure (SOP) for the operation of the Loadrite load cell weighing system for AQMD approval. The written SOP shall comply with all requirements stated in this permit condition. Quemetco shall comply with the revised written SOP unless otherwise approved in writing by the AQMD.

These conditions are required to verify Quemetco's comprehensive and correct implementation of the permit conditions issued in the proposed permit.

23) Quemetco shall submit monthly reports documenting each bucket weight charged, each missing data event, and the total tons of material charged for each day of the month as well as all calibration data, and all operational anomalies associated with the furnace operation and/or feed weighing system operations.

Since this systematic approach is relatively new, the District needs to monitor this operation closely.

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24) Each report required by Item 23 of these conditions shall be submitted to the AQMD's Toxics Team not later than the 10th day of the following month, for each month in the first six months following the issue date of this permit, and semiannually thereafter.

Since this systematic approach is relatively new, the District needs to monitor this operation closely.

25) The semiannual report (required by Item 23 of these conditions) covering January through June, inclusive, shall be submitted not later than August 31 of the same calendar year. The semiannual report covering July through December, inclusive, shall be submitted not later than February 28 of the following calendar year.

This procedure was suggested by Quemetco and the AQMD has concluded that it is a reasonable progression to the record keeping methodology.

26) Quemetco shall keep and maintain all records required by this condition, including, but not limited to, serial number of each test weight, mass (in pounds) of each test weight, records of each test weight calibration, records of each test weight recalibration due to damage, recorder charts, Loadrite calibration data, daily production records, and daily read-only electronic records from SCADA (e.g., in the TIFF or PDF universal image formats.)

This condition itemizes the minimum amount of information required to demonstrate compliance with these conditions. Read-only non-editable electronic record files will facilitate the archiving and reporting requirements of this condition and add data security to the data records (since an image file cannot be edited as readily as a database record and since an image file retains additional forensic information.)

27) All records required by this condition shall be kept onsite for a minimum of five years and made available to District personnel upon request. For those records which are generated in an electronic format, Quemetco shall comply with this condition by maintaining the electronic format of the records.

The five year record retention period is a federal Title V permit requirement.

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New Condition S53. 2:

The following conditions shall apply to the equipment in this system:

- 1. The operator shall keep and maintain all hand written comments, logs, notes, and/or records prepared by each shift supervisor regarding the operation of the rotary dryer and reverberatory furnace.**

In previous communications with the District, Quemetco has proposed to eliminate most, if not all, hard copies of data used for operational and/or compliance purposes. This is unacceptable because it creates a possibility for record alteration, since an inspector cannot verify that a digital record in a database had the original meaning and contained the same amount of data as the hand written data (if available) obtained in the process area of this facility. In addition, Quemetco is not allowed, under Title V requirements, to destroy hard copies of operational and/or compliance records which may contain information concerning potential permit condition violations. In order to prevent the destruction of important records required for compliance purposes, this condition will clarify what type of records shall be retained (i.e., hard copy records) in order to ensure compliance with all permit conditions.

- 2. These hand written records shall be kept onsite for a minimum of five years and shall be provided to AQMD personnel upon request.**

This is a Title V federal permit requirement.

