FINAL ACTION REPORT PART 70 PERMIT

Titanium Metals Corporation
Source Number 19

Public Notice: Review-Journal August 25, 2011
Public Comment: August 26, 2011 to September 24, 2011

Comments Received: Titanium Metals Corporation

Public Hearing: No public hearing requested.

Issuance date: December 23, 2011
Expiration date: December 22, 2016

Copies of comments received and responses to all comments are part of this final action report. All responders shall receive an electronic copy of this report, the final Part 70 Operating Permit (OP), and the final Technical Support Document (TSD).

COMMENTS RECEIVED FROM TITANIUM METALS CORPORATION AND DAQEM RESPONSE

Titanium Metals Corporation (TIMET) provided a number of official comments to the draft Title V Permit and Technical Support Document (TSD). The official letter from the source is attached at the end of this document.

Control Officer Response: The Control Officer incorporated a number of comments from Titanium Metals Corporation into the Part 70 OP and TSD, either in full or in part. These are discussed in detail below:

TIMET Comments to the Part 70 Operational Permit

Comment 1: Executive Summary:
TIMET requested removal of the synthetic minor designation for PM_{10} in the executive summary.

Control Officer Response: The source PM_{10} PTE is 64.36 tons per year, which is based on its operating capacity. If the source has not taken a voluntarily accepted emission limit (VAEL) to maintain the PTE below the major source threshold, the source is a true minor for that pollutant. Based on DAQEM policy the source is minor for PM_{10}.

II. General Conditions

Comment 2: General Requirements
TIMET requested inclusion of the general condition from the previous version of the draft permit:
"The Permittee may request confidential treatment of any records in accordance with AQR. Emission data, standards or limitations (all terms as defined in 40 CFR 2.301(a)) or other information as specified in 40 CFR 2.301 shall not be considered eligible for confidential treatment. The Administrator and the Control Officer shall each retain the

authority to determine whether information is eligible for confidential treatment on a case-by-case basis." *[AQR 12.5.2(g)(5) and 40 CFR 2.301]*

Control Officer Response: Condition II-C-3 is verbatim from AQR 12.5.2(g)(5) to address confidential information. No changes were made in the permit.

Condition II-C-3 says:
The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the Administrator (USEPA, Region IX) along with a claim of confidentiality. *[AQR 12.5.2.6(g)(5)]*

Comment 3: Monitoring
TIMET feels that the visible emissions (VE) monitoring requirement creates an excessive, burdensome VE monitoring and recordkeeping regime that cannot be complied with nor adequately verified by DAQEM staff. The regime mandates observing many emissions units that either never or rarely generate a visible plume or have no potential to generate plume >20% opacity. The source believes that the VE monitoring requirements mandate coverage by Method 9-trained employees 7-day-a-week on every process since only Method 9-trained employees are can tell the difference between a plume that "appears to exceed the opacity standard versus plume in compliance. According to source, only few of the 48 continuously operating emission units are likely to create a "visible plume" that would justify a VE observation. Consequently, TIMET strongly requested that the VE monitoring requirements revert to the April 12, 2011 draft of the Part 70 OP with the following schedule presented below:

Table 1: Summary of Proposed VE Checks

Process	EUs Subject to Check	EUs Subject to Check when Operating	Number of VE Checks per year
Raw Materials Storage and Handling	---	A01- A09	86
Chlorination	B06, B11-B18. B20	---	312
Purification	C01, C02	---	---
VDP Process	E01	E03	56
Magnesium Recovery	G03	G10	56
Blending	H01-H07	---	208
Melt/Reclaim	K01, L02, L03	---	156
Miscellaneous	M01	---	52
WCF Process	---	---	---
Groundwater Remediation	---	---	---

The VE schedule proposed by the source is anticipated to generate about 1,100 observations per year (currently 1,084) and is focused on the emission units with potential to generate visible plume that exceeds the opacity standard. This schedule concentrates the VE observations with TIMET environmental staff that works 5 days a week and allows for better consistency of the VE observations.

Control Officer Response: The visible emission observation requirement applies to each process rather than each emission unit, except for stack emissions. Therefore, appropriate changes such as visible emission checks frequency for each process have been made in monitoring requirements of various sections of the permit. Conditions II-E-1 is modified and new conditions (III-A-5(a), III-B-5(a), III-C-5(a), III-D-5(a), III-E-5(a), III-F-5(a), III-G-5(a) and III-H-5(a)) were added.

III. Emission Units and Applicable Requirements

Comments 4: A. Raw Material Storage and Handling - Recordkeeping
TIMET proposed re-wording of the condition III. A.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under Monitoring, records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 5: B. Chlorination Process – Emission Units
TIMET requested to change the rating of the rental boiler (EU: B19) from 11.3 MMBtu/hr to 14.7 MMBtu/hr in Table III-B-1.

Control Officer Response: On August 17, 2010, in the supplemental application for Part 70 OP renewal, TIMET stated that EU: B19 denotes a rental package boiler. The unit is brought onsite twice a year during the semi-annual preventive maintenance on EUs: B06 and B09 to supply steam to the purification process. To reflect the reality, TIMET requested that the unit description be updated to reflect that one of several boilers that could operate at the facility during semi-annual preventive maintenance. On June 21.2011, TIMET proposed to that rental boiler be rated up to 14.7 MMBtu/hr with the emission limits of 30 ppm NO_x and 5 ppm CO. Consequently, the annual emissions would remain the same as in current Part 70 OP issued in May 2004.

The requested changes were made in the permit based on this request.

Comment 6: B. Chlorination Process – Emission Units
The EU: M02 Ammonia Refrigeration System was deleted from the emission units table (Table III-B-2). TIMET requested removal of the condition III.B.7.a.i since the EU: M02 was removed:

a. The Permittee shall maintain records on site that include, at minimum, the following information *[AQR 12.5.2.6(d)]*:

i. a log book monthly and annual amount of NH_3 purchased for refrigeration system (EU: M02);

Control Officer Response: The condition was removed as requested

Comment 7: B. Chlorination Process – Emission Limitations
The source stated: "Table III-B-3: Emission Unit PTE (pounds per hour) – Chlorination Process" is missing columns for PM_{10} and $PM_{2.5}$. TIMET requested inclusion of these columns in the table.

Control Officer Response: The short term limits in pounds per hours (lbs/hr) are listed in the Part 70 OP only for the pollutants that require performance testing. Since there are no requirements for performance testing for PM_{10} and $PM_{2.5}$ on EUs: B06a,b and B10 the short term limits (lbs/hr) for these units were not listed in the permit. However, these limits are listed in the Technical Support Document (TSD). No change is made in the permit based on this request.

Comment 8: B. Chlorination Process – Emission Limitations
Condition III-B-2(f): The source argues that the 37.42 lbs/hr SO_2 emissions based on 48 equivalent reductions per day (ER/day) using a blend of 0.8% wt. sulfur coke are too high. The actual SO_2 emissions are over-estimated because 48 ER/day represents the maximum four chlorinator operating rate. Recent semi-annual maintenance periods averaged 24.7, 24.1, 17.9, 33.3, and 34.9 ER/day. TIMET claims this condition provide for more accurate emission rate based on the actual average ER/day during each semi-annual maintenance period. Example: (24.7/48) x 37.42 = 19.26 lb/hr SO_2.

Control Officer Response: The 37.42 lbs/hr SO_2 emissions are purposefully based on 48 equivalent reductions per day (ER/day) using a blend of 0.8% wt. sulfur coke to utilize the worst case scenario in the assessment of the potential to emit (PTE). The actual SO_2 emissions during the semi-annual maintenance periods are calculated and reported as suggested by the source. Therefore, Condition III-B-2(f) remains unchanged.

Comment 9: B. Chlorination Process – Emission Limitations
The source proposed to change title of Table III-B-4 to: "Upset/Breakdown Uncontrolled Emissions (lbs/hr) – Four Chlorinators Operation"

Control Officer Response: The title changed as suggested.

Comment 10: Chlorination Process – Emission Limitations
The source argues that proposed 12.25 lb/hr CO PTE for EU: B06a is too high (Table III-B-4). TIMET believes that the actual 2010 average CO emission rate 4.0 lb/hr should be used without the three-sigma statistical variation to create 12.25 lb/nr rate. TIMET asserts there is no factual basis for inflating the annual average CO emission rate to estimate future CO emissions at the make-up damper. The already burned CO at the make-up damper has the same CO rate at the scrubber stack CEMS. TIMET requests a 4.0 lbs/hr rate in Table III-B-4 to estimate CO emissions at make-up damper.

Control Officer Response: The 12.25 lb/hr CO PTE for EU: B06a was calculated from the data supplied by TIMET. During the malfunction of the SO_2 scrubber (EU; B06b) the chlorination off-gas can be vented after the CO boiler (EU: B06a) through the make-up damper. The emissions at the make-up damper with the CO boiler on-line were based on

the average CO boiler emissions. The CO emissions were calculated from the annual CEMS data collected during 2010. The following methodology was adapted by DAQEM to establish the correct CO burner CO emissions (EU: B06a) at the make-up damper. Monthly CO CEMS results for 2010 were averaged. A standard deviation of (σ = 2.75 lb/hr) was calculated and three standard deviations (3σ) value of 8.25 lb/hr was added to the average emission rate of 4.00 lb/hr. Therefore, the resulting CO emission factor was increased to 12.25 lb/hr CO for EU: B06a at the make-up dumper. The submitted data and the calculations are listed in the TSD (Table I-C-5):

Table I-C-5: Proposed Stack CO Emissions at the Make-up Damper

Month	EU: B06b Stack CO Actual Emissions (CEMS)- lbs	EU: B06b hours on-line	EU: B06b Stack CO (lbs/hr)
January	5,954	742.9	8.01
February	6,196	688.1	9.00
March	4,948	768.0	6.44
April	962	417.2	2.31
May	2,364	708.9	3.33
June	1,366	720.0	1.90
July	713	645.0	1.11
August	1,537	744.0	2.07
September	3,975	615.8	6.46
October	839	742.9	1.13
November	1,497	526.3	2.84
December	2.378	743.5	3.20
Average ± 3σ	2,016 ± 6,048	672.0 ± 318.0	**4.00 ± 8.25**

The proposed 4.0 lbs/hr CO limit was exceeded during four months (33%) in 2010. Therefore, the condition remains unchanged.

Comment 11: B. Chlorination Process – Emission Limitations
The source argues that the short term limit of 37.42 lb/hr SO_x at EU: B06a is too high (Table III-B-4). TIMET requests that the actual 2008 average emission rate 2.08 lb/hr based on the performance testing should be used. The 2.08 lb/hr SO_x rate has been utilized in deviation reports. TIMET requests a 2.08 lbs/hr rate in Table III-B-4 to estimate the SO_x emissions at make-up damper.

Control Officer Response: PTE should be based on a worst case emission scenario and it cannot be estimated based on the average operational conditions. No changes made to the permit condition.

Comment 12: B. Chlorination Process – Production Limitations
TIMET requested to change the rating of the rental boiler (EU: B19) from 11.3 MMBtu/hr to 14.7 MMBtu/hr.

Control Officer Response: Please refer to the response to the comment #5. The change was made in the permit based on this request.

Comment 11: B. Chlorination Process – Control Requirements
TIMET requested change of the condition III.B.4.c: "The Permittee shall direct all chlorination off-gas to the CO boiler or to the thermal oxidizer (EU: B10) to reduce CO emissions from the chlorination process at least by 90.0 percent. The Permittee shall

use CEMS for CO to monitor compliance with this condition for the CO boiler (EU: B06a). *[NSR ATC/OP 19, Modification 13 (05/08/2006)]"*

The source cannot comply with condition as stated since the CEMS measures CO at the EU: B06a stack. Consequently, TIMET proposed new wording of this condition:

"The Permittee shall direct all chlorination off-gas to the CO boiler or to the thermal oxidizer (EU: B10) to reduce CO emissions from the chlorination process at least by 90.0 percent. The Permittee, every five years in accordance with the testing conditions, shall sample chlorinator off-gas upstream of EU: B06a and at Scrubber stack EU: B06b to verify compliance with this condition."

Control Officer Response: The condition was changed as requested and reads:
"The Permittee shall direct all chlorination off-gas to the CO boiler or to the thermal oxidizer (EU: B10) to reduce CO emissions from the chlorination process at least by 90.0 percent. The Permittee, every five years in accordance with testing conditions, shall sample chlorinator off-gas upstream of CO boiler (EU: B06a) and at Scrubber stack (EU: B06b) to verify compliance with this condition. *[AQR 12.5.2.6]"*

Comment 12: B. Chlorination Process – Control Requirements
TIMET asked to add a clarification to the condition III.B.4.f: "The resulting emissions shall be calculated using the emission factors listed in Table III-B-4."

Control Officer Response: The condition was revised as requested and reads: "The Permittee shall use a thermal oxidizer (EU: B10) to control CO emissions from the chlorination off-gas when the CO Boiler is bypassed during all periods of scheduled maintenance of the CO boiler. The Permittee shall also use the thermal oxidizer during all upset/breakdowns or malfunctions of the CO boiler whenever practically feasible if the anticipated duration of the event exceeds 4 hours. The resulting emissions shall be calculated using the emission factors listed in Table III-B-4 and shall be based on number of chlorinators in operation. *[AQR 12.5.2.6]*

Comment 13: B. Chlorination Process – Control Requirements
TIMET believes that AQR 12.5.2.6 does not apply to the condition III.B.4.h.: "If the control devices (CO boiler, SO_2 scrubber, or the thermal oxidizer) are not operating, release of off-gas from the caustic scrubbers (EUs: B01 through B04) or from the venturi scrubber exhaust stack (EU: B05) shall be considered as an upset/breakdown and the Permittee shall immediately take remedial measures. *[AQR 12.5.2.6]"*

Control Officer Response: The reference was changed to AQR 25.2.1 "Affirmative Defense for Malfunctions".

Comment 14: B. Chlorination Process – Control Requirements
TIMET asked to add a clarification to the condition III.B.4.i.: "The resulting emissions shall be calculated using EU: B01 – B05 emission factors listed in Table III-B-4."

Control Officer Response: The condition was revised as requested and reads: "If the CO boiler (EU: B06a) and the thermal oxidizer (EU: B10) break down simultaneously, the Permittee shall include calculated uncontrolled emissions during such

upset/breakdown and malfunction situations in the annual emissions calculations. The resulting emissions shall be calculated using the emission factors listed in Table III-B-4 and shall be based on the number of chlorinators in operation. *[AQR 12.5.2.6]"*

Comment 15: B. Chlorination Process – Control Requirements
TIMET asked to modify the condition III.B.4.j.: "If the SO_2 scrubber (EU: B06b) breaks down, the Permittee shall vent chlorination off-gas through CO boiler exhaust (make-up dumper)(EU: B06a) or thermal oxidizer (EU: B10). The Permittee shall include calculated uncontrolled emissions during such upset/breakdown and malfunction situations in the annual emissions calculations. The resulting emissions shall be calculated using the emission factors listed in the Table III-B-4. *[AQR 12.5.2.6]"*

Control Officer Response: The condition was revised as requested and reads: "The Permittee shall, during the SO_2 scrubber (EU: B06b) maintenance or breaks down, vent chlorination off-gas through CO boiler exhaust make-up dumper (EU: B06a) or thermal oxidizer (EU: B10). The Permittee shall include calculated uncontrolled emissions during such upset/breakdown and malfunction situations in the annual emissions inventory. The resulting emissions shall be calculated using the emission factors listed in the Table III-B-4. *[AQR 12.5.2.6]"*

Comment 16: B. Chlorination Process – Monitoring
TIMET asked to modify the condition III.B.5.b.: "The Permittee shall install, calibrate, maintain, operate, and certify CEMS for CO and SO_2 on the CO Boiler/SO_2 Scrubber (EU: B06a and B06b). Each CEMS shall include an automated data acquisition and handling system. Each system shall monitor and record at least the following data *[AQR 12.5.2.6(d)]*:

Control Officer Response: The condition was revised as requested and reads: "The Permittee shall install, calibrate, maintain, operate, and certify CEMS for CO and SO_2 on common exhaust stack of the CO Boiler/SO_2 Scrubber (EU: B06a and B06b). The CEMS shall include an automated data acquisition and handling system that shall monitor and record at least the following data *[AQR 12.5.2.6(d)]*:

Comment 17: B. Chlorination Process – Monitoring
TIMET asked to modify condition III.B.5.h.: "The Permittee shall monitor the monthly fuel consumption by the boiler (EU: B19). *[40 CFR 60, Subpart Dc]* to read: "The Permittee shall monitor operating hours of the boiler (EU: B19). *[40 CFR 60, Subpart Dc]*

Control Officer Response: The 40 CFR 60.48c(g)(2) requires monitoring of monthly fuel consumption. Therefore, the condition remains as is.

Comment 18: B. Chlorination Process - Recordkeeping
TIMET proposed changing of the condition III.B.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under <u>Monitoring, records</u> shall include at least the date and time, the name of the person

performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*
Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 19: C. Purification Process - Recordkeeping
TIMET proposed changing of the condition III.C.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under Monitoring, records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 20: D. Vacuum Distillation Process - Recordkeeping
TIMET proposed changing of the condition III.D.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under Monitoring, records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 21: E. Magnesium Recovery Process – Emission Limitations
TIMET requested: (a) change of the conditions in Table III-E-2 for EU: G04a,b to 600,000 lbs/yr with a commensurate change in H_2SO_4 PTE; (b) EU: G10 limit of 500 hrs/yr; (c) delete HCl PTE column since there is no reported HCl emissions.

Control Officer Response: The changes were implemented as requested.

Comment 22: E. Magnesium Recovery Process – Control Requirements
TIMET requested removal or change of the condition III.E.4.e: "The Permittee shall not test generator during air quality episodes such as alerts, warnings or emergencies declared by the Control Officer. *[AQR 70.1]"*

Control Officer Response: The condition has been removed because the Las Vegas Valley Air shed has been re-designated to CO Attainment.

Comment 23: E. Magnesium Recovery Process – Recordkeeping
TIMET requested removal of the condition III.E.7.a.i:

a. The Permittee shall maintain records on site that include, at minimum, the following information *[AQR 12.5.2.6(d)]*:
   i. records showing at least the dates and time when checks are taken and the steps taken to make any needed corrections to bring opacity into compliance;

Control Officer Response: The condition has been deleted as it was redundant with condition III.E.7.c. New condition has been added in place "records of all inspections, maintenance, and repairs as specified in this document"

Comment 24: E. Magnesium Recovery Process – Recordkeeping
TIMET proposed changing of the condition III.E.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under <u>Monitoring, records</u> shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 25: F. Blending Process – Production Limitations
TIMET requested change of the condition III.F.3.a: "The Permittee shall limit throughput of each of the sponge blending system to 15,000 pounds per hour (EUs: H01 through H07). *[NSR ATC/OP 19, Modification 13 (05/08/2006)]" to :* "The Permittee shall limit

throughput of each dry cyclone dust collector of the sponge blending system to 15,000 pounds per hour (EUs: H01 through H07). *[NSR ATC/OP 19, Modification 13 (05/08/2006)]"*

Control Officer Response: Condition has been changed as requested.

Comment 26: F. Blending Process – Recordkeeping
TIMET requested removal of the condition III.F.7.a.i:

a. The Permittee shall maintain records on site that include, at minimum, the following information *[AQR 12.5.2.6(d)]*:
   i. records of daily visual emission checks;

Control Officer Response: The condition has been changed to: "records of all inspections, maintenance, and repairs as specified in this document"

Comment 27: F. Blending Process – Recordkeeping
TIMET proposed changing of the condition III.F.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under <u>Monitoring, records</u> shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 28: G. Melt/Reclaim Process – Recordkeeping
TIMET requested revision of the conditions III.G.7.a. and III.G.7.b.to include EU: L03

Control Officer Response: The conditions have been updated as requested.

Comment 29: F. Blending Process – Recordkeeping
TIMET proposed changing of the condition III.G.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under <u>Monitoring, records</u> shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 30: H. Miscellaneous Process – Emission Units
TIMET requested change of the capacity of the Above Ground Gasoline Storage Tank (EU: M07) from 450 gal to 500 gal and change the name of the EU: W04 to Alpha Ditch Emergency Generator (Table III-H-1).

Control Officer Response: The changes were implemented as requested.

Comment 31: H. Miscellaneous Processes – Control Requirements
TIMET requested revision of the condition III.H.4.c.: "The Permittee shall maintain an effective seal around the baghouse and the pressure drop across baghouse shall be maintained within the limits specified by the manufacturer (EU: M01). *[NSR ATC/OP 19, Modification 13 (05/08/2006)]",* to include the baghouse designation as" Wheelabrator baghouse".

Control Officer Response: The condition was revised as requested

Comment 32: H. Miscellaneous Process – Control Requirements
TIMET requested removal or change of the condition III.H.4.o: "The Permittee shall not test generator during air quality episodes such as alerts, warnings or emergencies declared by the Control Officer. *[AQR 70.1]"*

Control Officer Response: The condition has been removed because the Las Vegas Valley airshed has been re-designated to CO attainment.

Comment 33: H. Miscellaneous Processes – Recordkeeping
TIMET proposed changing of the condition III.H.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under <u>Monitoring, records</u> shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 34: I. Wastewater Conservation Facility – Recordkeeping
TIMET proposed changing of the condition III.I.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under Monitoring, records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

Comment 35: J. Groundwater Remediation System – Recordkeeping
TIMET requested removal of the condition III.J.7.a.iii, requirements for visioble emission checks.

Control Officer Response: Condition has been deleted as requested. There is no visible emission check requirement for this process.

Comment 36: J. Groundwater Remediation System – Recordkeeping
TIMET proposed changing of the condition III.J.7.c: "For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

The proposed wording: " For all inspections, visible emission checks, and testing required under Monitoring, records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]"*

Control Officer Response: The condition is revised to clarify the intent of the condition. The revised condition states:

Permittee shall include for all inspections, logs, visible emission checks, and tests required under monitoring, recordkeeping, and reporting at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). *[AQR 12.5.2.6(d)]]*

TIMET Comments to the Technical Support Document

Comment 1: Executive Summary
TIMET requested removal of the "synthetic minor for PM_{10}" designation from the executive summary.

Control Officer Response: The source PM_{10} PTE is 64.36 tons per year, which is based on its operating capacity. If the source has not taken a voluntarily accepted emission limit (VAEL) to maintain the PTE below the major source threshold, the source is a true minor for that pollutant. Based on DAQEM policy the source is minor for PM_{10}.

Comment 2: Executive Summary
TIMET requested update of emissions in Table 1:

Table 1: Maximum Source PTE (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP
PTE Totals	64.38	56.39	11.31	394.19	85.13	7.28	2.79
Major Source Thresholds	70	100	100	100	100	100	25/10[1]

[1]25 tons for combination of all HAPs (no single HAP exceeds 10 tons).

Control Officer Response: The Table was updated as requested.

I. SOURCE INFORMATION

Comment 3: C. Permitting History
TIMET requested revision of the formula for calculation of CO lbs vented at EU: B05:

<u>CO lbs vented at EU: B05:</u>
(off-gas venting hours X 1,137 lb/hr/4 X Number of Chlorinators online) = CO lbs/hr

Control Officer Response: The formula was revised as requested.

Comment 4: C. Permitting History
TIMET requested revision of the sentence on page 11:

"During the scheduled maintenance of the CO Boiler the off-gas should be vented through the thermal oxidizer (EU: B10) and the sulfur dioxide emissions from the Chlorination Process shall be limited to 37.42 pounds per hour (This value is based on 48 equivalent reductions per day using 0.8 percent by weight low sulfur coke)."

Control Officer Response: The sentence was revised as requested by inserting "scheduled" before maintenance.

Comment 5: C. Permitting History
Pursuant to NRS 445B-570, TIMET requested removal of the entire "Source Information" section (pages 4-14) of the TSD. The source wants to the entire "Source Information" section of the TSD to be considered as "business confidential" and removed from the DAQEM's public files. TIMET is concerned with the competitor attempting to obtain specific information about TIMET process.

Control Officer Response: The process description contained in the proposed TSD had been already available on the publicly accessible DAQEM website that include current Part 70 OP and TSD. Removal of this information is beyond the scope of this permitting action. TIMET should formulate the separate official request to DAQEM to remove parts of the TSD. At the present time the TSD remains unchanged.

Comment 6: C. Permitting History
TIMET argues that the two statements in the TSD conflict each other:

"By accepting the revised emission limit for EU: B06b stack, DAQEM confirms that the excess emissions released during any upset/breakdown situation at the chlorination process should not be counted towards the emission limits. *Any such excess emissions resulting from an upset/breakdown must be addressed in accordance to AQR Section 25.*"
And
"DAQEM accepted new CO emission limit for CO Boiler/SO_2 Scrubber (EUs: B06a and B06b). The operational scenario requires 100% of the chlorination off-gas to be vented through the CO Boiler/SO_2 Scrubber. During the scheduled maintenance of the CO Boiler the off-gas should be vented through the thermal oxidizer (EU: B10) and the sulfur dioxide emissions from the Chlorination Process shall be limited to 37.42 pounds per hour (This value is based on 48 equivalent reductions per day using 0.8 percent by weight low sulfur coke). The source explained it is not feasible to operate the thermal oxidizer (EU: B10) during most upset/breakdowns of the CO Burner/Boiler (EU: B06a). Consequently, *the upset/breakdown emissions due to CO venting at EUs: B01 through B05 must be quantified and reported as excess emissions on case-by-case basis.*"

Timet also stated that the Permit Condition II.D.7 and 8 conflicts with the above TSD statements.

Control Officer Response: The permit allows no emission from EUs B01-B05. If there is upset/breakdown or malfunction, the chlorination off-gas venting before the control devices shall be considered excess emissions and shall be reported under the provisions of AQR Section 25. Therefore, there is no conflict between the above *italicized* TSD explanations and the permit conditions.

II. EMISSION INFORMATION

Comment 7: A. Source-wide Potential to Emit
TIMET requested update of emissions in the Table II-A-1 and Table II-A-2:

Table II-A-1: Source-wide PTE (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP
PTE Totals	**71.70**	**56.39**	**11.46**	**394.22**	**85.14**	**7.29**	**2.82**
Major Source Thresholds	**70**	**100**	**100**	**100**	**100**	**100**	**25[1]**

[1]25 tons for combination of all HAPs (no single HAP exceeds 10 tons).

Table II-A-2: Source PTE by Process (tons per year)

Process	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	HCl	Cl_2	COS	H_2SO_4
Raw Materials Storage and Handling	1.74	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chlorination	10.80	8.26	10.49	393.92	85.07	0.20	0.05	0.13	0.39	0.31	3.75
Purification	6.12	5.52	0.42	0.09	0.01	0.78	0.01	1.67	0.00	0.00	0.00
Vacuum Distillation	26.22	23.48	0.16	0.03	0.02	0.04	0.01	0.80	0.35	0.00	0.00
Magnesium Recovery	11.67	10.48	0.05	0.01	0.01	0.01	0.01	0.00	1.45	0.01	0.00
Blending	2.10	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Process	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_x	VOC	HAP	HCl	Cl_2	COS	H_2SO_4
Melt/Reclaim	4.08	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous	1.65	1.48	0.19	0.14	0.02	5.88	2.48	1.52	0.00	0.00	0.34
Wastewater Reclamation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Groundwater Remediation	0.00	0.00	0.00	0.00	0.00	0.37	0.23	0.00	0.00	0.00	0.00
Total	**64.38**	**56.39**	**11.31**	**394.19**	**85.13**	**7.28**	**2.79**	**4.12**	**2.22**	**0.32**	**4.09**

Control Officer Response: The Tables were updated as requested.

Comment 8: B. Emission Units and PTE
TIMET requested to change the rating of the rental boiler (EU: B19) from 11.3 MMBtu/hr to 14.7 MMBtu/hr in Table II-B-4.

Control Officer Response: In the supplemental application for Part 70 OP renewal from August 17, 2010 TIMET stated that EU: B19 denotes a rental package boiler. The unit is brought onsite twice a year during the semi-annual preventive maintenance on EUs: B06 and B09 to supply steam to the purification process. The current description assumes that the same Cleaver Brooks boiler is always utilized. To reflect the reality, TIMET requested that the unit description be updated to reflect that one of several boilers could operate at the facility during semi-annual preventive maintenance. Since 2007, three boilers, rated from 300 to 350 hp, were used. The maximum rate of natural gas consumption corresponds to 11.7 MMBtu/hr based on 350 hp conversion. DAQEM revised permit conditions for the rental package boiler (EU: B19) to reflect conditions in the previous permits and the original emission limits based on BACT/LEAR determination established in ATC/OP Modification 10 (06/15/2004). The boiler is rated 11.7 MMBtu/hr (based on 350 hp conversion) and the control limits are 30 ppm NO_x and 5 ppm CO. Date of the communication (06/21/2011)

Comment 9: B. Emission Units and PTE
TIMET requested to change the Cl_2 emission limit of CO scrubber (EU: B06a) from 1.0 lb/hr to 0.03 lb/hr in Table II-B-7. The 1.00 lb/hr limit applies to emissions before 97% control provided by the scrubber unit. The total Cl_2 emissions in Table II-B-7 should be adjusted to 0.06 lb/hr.

Control Officer Response: The changes were applied as requested.

Comment 10: B. Emission Units and PTE
TIMET requested to correction of titles in Table II-B-8 and Table II-B-9 to include the "Purification Process".

Control Officer Response: The changes were implemented as requested.

Comment 11: B. Emission Units and PTE
TIMET requested to include "Dynaware" as Model # for EU: 01 in Table II-B-12.

Control Officer Response: The change was implemented as requested.

Comment 12: B. Emission Units and PTE
TIMET requested to change conditions to "10.3 lb/1000 lb electrodes" for EU: 02 in Table II-B-13.

Control Officer Response: The change was implemented as requested.

Comment 13: B. Emission Units and PTE
TIMET requested to change HAP emissions to "0.13 lb/hr" for EU: E03 in Table II-B-13, based on the 2004 permit emission factors and 500 hr/yr emergency usage.

Control Officer Response: The change was implemented as requested.

Comment 14: B. Emission Units and PTE
TIMET requested addition of the footnote in Table II-B-16, to clarify the rating of 36.64 lbs/day for EU: G03.

Control Officer Response: The footnote was added as requested: "28.80 lbs/day for $MgCl_2$ transfer; 7.70 lbs/day for other activities, and 0.14 lbs/cell anode change = 36.64 lbs/day."

Comment 15: B. Emission Units and PTE
TIMET requested change of the conditions in Table II-B-16 for EU: G04a,b to 600,000 lbs/yr, based on the actual H_2SO_4 usage ranging 180,000 – 404,000 lbs/yr, with commensurate change in PTE and EU: G10 limit of 500 hrs/yr. The source also asked to delete HCl PTE column since there are no reported HCl emissions.

Control Officer Response: The changes were implemented as requested.

Comment 16: B. Emission Units and PTE
TIMET requested addition of the footnote in Table II-B-17, to clarify the rating of 36.64 lbs/day for EU: G03.

Control Officer Response: The footnote was added as requested: "Hourly emissions are calculated from 36.64 lbs/day PTE divided by 24 hours."

Comment 17: B. Emission Units and PTE
TIMET requested change of the capacity of the Above Ground Gasoline Storage Tank (EU: M07) from 450 gal to 500 gal and change the name of EU: W04 to Alpha Ditch Emergency Generator (Table II-B-24).

Control Officer Response: The changes were implemented as requested.

Comment 18: C. Testing
TIMET requested few changes in Table II-C-1: Performance Testing Requirements (40 CFR 60, Appendix A).

a. to remove of COS as tested pollutant for EU: B06 a,b and requested change of the testing method for H_2SO_4 to EPA Method 18,
b. to clarify the description of parameters for EU: B06 a.b to: "%S coke, reductions/day during semi-annual boiler maintenance",
c. to change CO Boiler parameter EU: B10 to 1,400ºF, and
d. to change description of EU: B20 to "Chlorination Dust Loading Wet Scrubber".

Control Officer Response: The changes were implemented as requested.

Comments Received from EPA Region IX

There were no comments received from EPA Region IX.

Attachments:

1. Title V Permit Comments from Titanium Metals Corporation on September 23, 2011.