Golder Associates Inc.

6241 NW 23rd Street, Suite 500 Gainesville, FL 32653-1500 Telephone (352) 336-5600 Fax (352) 336-6603



November 6, 1998

9651002

Administrator, New Source Review Section Florida Department of Environmental Protection 2600 Blair Stone Road Tallahassee, Fl 32399-2400

RECEIVED

Attention: Mr. A. A. Linero, P.E.

NOV 09 1998

KILN NO. 2 INDIRECT FIRING MODIFICATION

BUREAU OF AIR REGULATION

TARMAC FLORIDA, INC. PENNSUCO PLANT

Dear Mr. Linero:

RE:

Tarmac Florida, Inc., has received the Department's letters dated March 5, 1998 and September 21,1998, regarding the conversion of Kiln No. 2 at Pennsuco to indirect firing. This correspondence is in response to those letters.

Tarmac is currently under a consent order with the Dade County Department of Environmental Resources Management (DERM). The consent order requires compliance with the existing Kiln No. 2 permit limit for NO_x, or that the kiln cease burning coal.

The Department's letter dated March 5 alludes to a new construction permit for this conversion, since the expiration date of permit no. AC13-169901 has passed. However, we believe that permit no. AC13-169901 is still in effect. This permit was extended by the Department until May 31, 1996 (see attached correspondence). According to Rule 2-213.420(1)(a)4, the expiration dates of all air construction permits for Title V sources that expire between September 1, 1995 and November 1, 1996, are extended to the later of November 1, 1996, or 240 days after commencing operations. Since the subject permit expiration date of May 31, 1996, was between these two dates, and the kiln conversion has not yet been completed (commenced operations), the permit is automatically extended until 240 days after commencing operations under the indirect firing conversion. Therefore, the original air construction permit should still be in effect. The Department can simply amend the original construction permit, as necessary, to require performance tests after the retrofit is completed.

In so far as providing additional information regarding complete pollutant information, drawings, and a detailed description of the work to be performed, this is also considered unnecessary. All pollutant allowable emission rates and maximum emissions reflected in the current construction permit and previous application remain unchanged. In this regard, it is unnecessary to once again provide this same information. All that was being addressed in Tarmac's February submittal was a new coal bin and baghouse, plus the physical change to indirect firing on Kiln No. 2.

The physical change to indirect firing is portrayed in the attached flow diagrams. In the present direct firing method (Figure 1), coal from the coal mill is sent directly to Kiln No. 2 via the primary air fan. The primary air volume, which is a high volume flow, is determined by the amount of air needed to pneumatically convey the coal through the coal mill. The

primary air cannot be adjusted to result in lower emissions. Secondary air for the kiln is drawn from the clinker cooler.

In the proposed indirect firing method (Figure 2), a pulverized coal bin (new) is added downstream of the coal mill. The air from the coal mill is exhausted through a baghouse (new) serving the coal bin. Pulverized coal from the coal bin is then sent to the kiln, separate from the primary combustion air. Although some air is needed for transporting the coal to the kiln, it is small compared to the air entering the kiln with the coal in the direct firing method. Primary air enters the kiln independently, and is controlled independently of the coal input or the secondary air input. Secondary air continues to be drawn from the clinker cooler. This greater control over the primary air to the kiln should result in substantial NO_x reductions.

No detailed engineering information is yet available for the proposed indirect firing method. However, the attached flow diagrams show the major changes.

The conversion of Kiln No. 2 to indirect firing will clearly lower NO_x emissions, but may not lower NO_x emissions enough to meet the current permit limits. The most relevant NO_x emissions information upon which to base a judgement are data from Kiln No. 3 at Pennsuco. Although Kiln No. 3 is much large than Kiln No. 2, it is an indirect coal-fired kiln. An indirect firing system installed on Kiln No. 2 would be very similar in nature and operation to the Kiln No. 3 system. Historic NO_x emissions data from Kiln No. 3 demonstrate NO_x emissions in the range of 0.6 to 2.3 lb/MMBtu, with an average of about 1.2 lb/MMBtu. This level of NO_x emissions is higher than would be allowed under Tarmac's construction permit (0.70 lb/MMBtu, with provisions to raise up to 1.0 lb/MMBtu). As a result, there is no guarantee that conversion to indirect firing will result in compliance with the NO_x emissions limit. Additional control measures may be required, or Tarmac may have to cease coal firing in Kiln No. 2.

A corrected page III.Part 9b-1 is attached. Thank you for consideration of this information. Please call if you have any questions concerning this information.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff, P.E. Principal Engineer Florida P.E. #19011

SEAL

DB/tyf

cc: Scott Quaas Jim Alves File (2)

J:\DP\PROJECTS\96\9651\9651002A\05\/05lbr doc

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2 Coal Handling System

Pollutant Potential Estimated Emissions: Pollutant 1								
1. Pollutant Emitted: PM								
2. Total Percent Efficiency of Control: %								
3. Potential Emissions: 0.94 lb/hour 3.70 tons/year								
4. Synthetically Limited? [] Yes [] No								
5. Range of Estimated Fugitive/Other Emissions:								
[]1 []2 []3 to tons/yr								
6. Emission Factor:								
Reference: BACT of 4/8/80								
7. Emissions Method Code:								
[]0 []1 []2 []3 []4 []5								
8. Calculation of Emissions (limit to 600 characters):								
10,914 dscfm x 0.01 gr/dscf x 60 min/hr ÷ 7,000 gr/lb = 0.94 lb/hr; 0.94 lb/hr x 7,884 hr/yr ÷ 2,000 lb/ton = 3.70 TPY								
2,000 10/1011								
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):								

DEP Form No. 62-210.900(1) - Form

Effective: 03-21-96

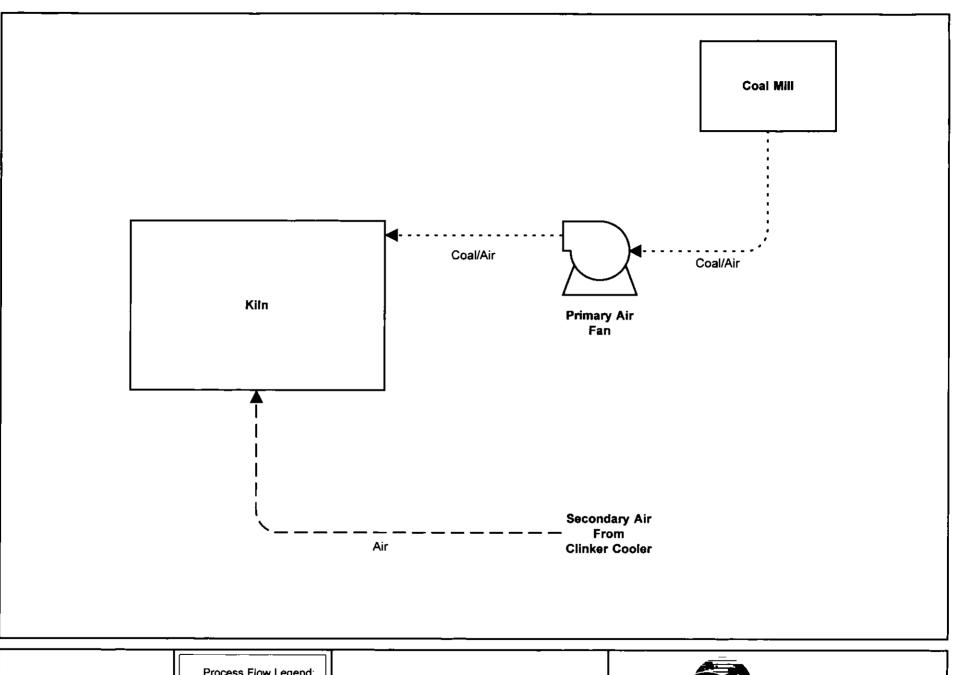


Figure 1: Direct Firing

Process Flow Legend:

Air

Coal

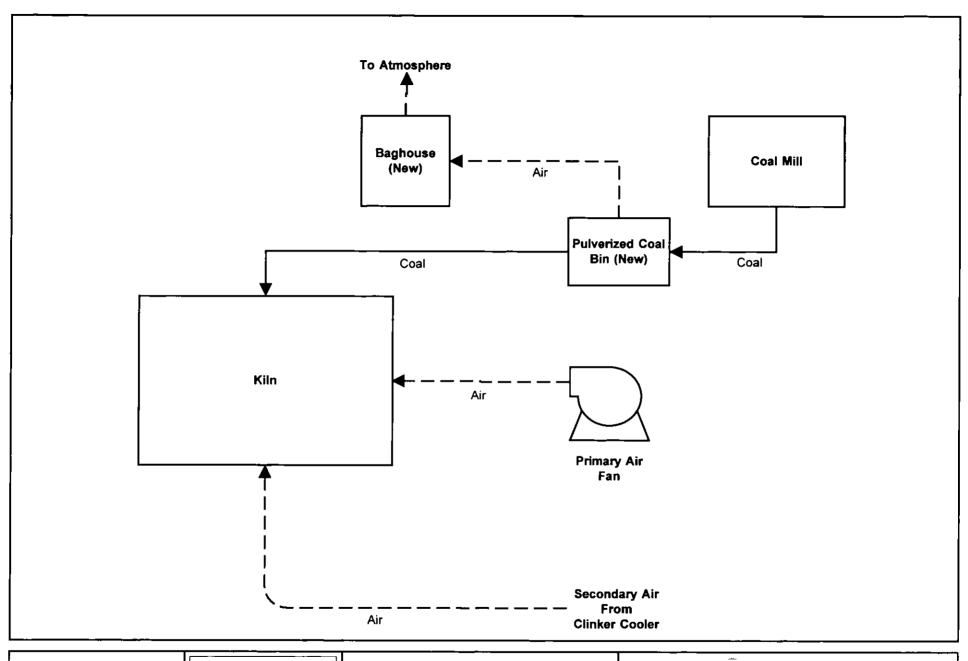
Air/Coal

Flow Diagram of Kiln #2

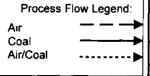
Filename KILNFLOW.VSD

Latest Revision Date: 10/27/98









Flow Diagram of Kiln #2

Filename: KILNFLOW.VSD

Latest Revision Date. 10/27/98





Department of Environmental Protection

Lawton Chiles Governor

September 21, 1998

Virginia B. Wetherell Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Scott Quaas, Environmental Manager Tarmac America, Inc. 455 Fairway Drive Deerfield Beach, Florida 33441

Re: Kiln No. 2 Indirect Firing Modification DEP File 0250020-007-AC (PSD-FL-142A)

Dear Mr. Quaas:

On March 5 the Department requested submittal of additional information to process the referenced application request. To-date we have not received a response. Please note that per Rule 62-\$6.055(1):

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

Over two ninety-day periods have transpired since our request for additional information. Because the rule provision was not in-effect when we requested the additional information, it will not be used at this time to deny the permit request. The nature of the information is such that a diligent effort would have yielded it by now and would certainly yield it in the next thirty days. Therefore, we are providing Tarmac a period of an additional 30 days from today to provide the requested information or show good cause that an extension is required.

If you have any questions regarding this matter, please call me at 850/921-9523 or John Reynolds at 850/921-9536.

Sincerely,

A. A. Linero, P.E. Administrator

New Source Review Section

AAL/aal

cc: Isidore Goldman, DEP/SED Patrick Wong, DERM Sharon Crabtree, DERM David Buff, Golder Assoc.



Department of Environmental Protection

Lawton Chiles Governor

September 21, 1998

Virginia B. Wetherell Secretary

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Sincerely,

A. A. Linero, P.E. Administrator New Source Review Section

. AAL/aal

cc: Isidore Goldman, DEP/SED Patrick Wong, DERM Sharon Crabtree, DERM David Buff, Golder Assoc.

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SENDER:

PS Fc 1994, December 1994

METROPOLITAN DADE COUNTY, FLORIDA





ENVIRONMENTAL RESOURCES MANAGEMENT

RECEIVED

AIR QUALITY MANAGEMENT DIVISION SUITE 900 33 S.W. 2nd AVENUE MIAMI, FLORIDA 33130-1540 (305) 372-6925

July 29, 1998

CERTIFIED MAIL -P 343 640 310 RETURN RECEIPT REQUESTED BUREAU OF AIR REGULATION

AUS 0.5 1398

Mr. Scott Quaass
Environmental Manager
Tarmac America, Inc.
455 Fairway Drive
Deerfield Beach, Florida 33441

File No.: 0250020-008-AC
County: Miami-Dade
Project: Tarmac America, Inc.
Tarmac Pennsuco

New Dry Process Plant

Re:

Additional Information Regarding New Dry Process Plant

Tarmac America - Tarmac Pennsuco

Dear Mr. Johnson:

The Department received your application for the modernization of the existing cement plant in Miami-Dade County, Florida. Based on a technical review, the application is incomplete. Pursuant to Rules 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C., please submit the following information, including all assumptions, reference materials and calculations:

Facility Wide

- 1. A copy of the application has been forwarded to EPA-Region IV, Florida Department of Environmental Protection in Tallahassee, and National Parks Service (attached letter dated July 7, 1998).
- 2. The application is signed by Mr. Scott Quaass, Environmental Manager. In accordance with 62-213.200(244), the application form must be signed by either an officer of the corporation, any other person who performs similar policy or decision-making functions, or a duly authorized representative of such person if the representative is responsible for the overall operation of one ore more manufacturing, production, or operating facilities. Please provide a letter of authorization from one of the corporate officers stating that Mr. Quaass performs one of the described operations.
- 3. Pursuant to Rule 62-212.400 (2)(e), F.A.C., please recalculate the net emission increases (sum of all 5 year contemporaneous creditable increases and decreases in the actual emissions of the facility) for all affected PSD pollutants listed in Table 62-212.400-2, F.A.C., to determine PSD applicability.
- 4. Pursuant to Rule 62-212.400(2)(d)4.(ii), F.A.C., if the facility to be modified is within 10 km of a Class I area and if the proposed modification results in a net emission increase (as set forth in Rule 62-212.400 (2) (e)1., F.A.C.) of any pollutant regulated under the Act, which increase would have an impact on the affected Class I area equal to or greater than 1.0 microgram per cubic meter (24-hour

- average), this modification shall be subject to the preconstruction review requirements of the PSD regulations. Calculate the impact of any emission increase on the Everglades National Park.
- 5. Submit existing test data (last five years) for NOx, SO₂, PM/PM10, Sulfuric Acid Mist, CO, and VOC, Pb, as well any non-criteria PSD pollutants for kilns No.1, No. 2 and 3. This is necessary to calculate all contemporaneous emissions changes.
- 6. This facility has going through several PSD reviews have these been considered in the calculations.
- 4. Submit existing data for all other HAPs pollutants that have been tested at this facility in the past five years. Include dates, baseline conditions, production rates and fuel burned.
- 5. Does this facility comply with the Miami-Dade County air pollution control regulations?
- 6. How does the facility propose to address the case-by-case MACT pursuant to 40 CFR 63.44(d) for HCL?
- 7. In reviewing estimation of HAPs for the new cement plant (Table 2-3) it is mentioned that data was used from testing Kiln No. 3 in December 1992, the following is noticed:
 - a. Was the test run at the same rate as the new kiln? If there is a change of emissions please provide new calculations.
 - b. Is there a reason for using a Kiln No. 3 data only in certain cases?
- 8. There is no consistency between the Annual Baseline 1996-1997 Emission From Kilns in Table 3-2, sometimes there is data from other years, please clarify.
 - a. How is the excess emission for nitrogen oxides considered for PSD review.
- 9. Provide documentation for emission factor mentioned where Vendor Information is mentioned.
- Provide documentation to ensure that materials proposed for use in the industrial process are nonhazardous.
- 11. Describe procedures used to startup and shutdown of the process equipment to minimize excess
- 12. Provide manufacturers specifications on the new baghouses that will be installed.
- 13. Calculate the flow (dscfm) for each baghouse. Show any estimates used in these calculations.
- 14. Perform an expanded Air Quality Related Values analysis to address impacts of the proposed changes on soils, vegetation, and visibility in the Class II area in the vicinity of the plant.
- 15. Describe good combustion practices to minimize NOx, CO, and VOC emissions from the kiln.
- 16. Type of Emission Unit:

Why are all the emission units for the entire application are classified as unregulated units?

17. Segment (Process/Fuel) Information:

Provide detail emission calculations on the segment of process/fuel sections for each of the products involved in the entire application.

- 18. Submit a detailed analysis of specifications, quantities of the different fuels and its emission calculations to be burned at each combustion source at this facility. Discuss any blending of fuel types.
- 19. Explain how the fuels are going to be used (start up, main, supplementary or emergency fuels) and the proposed annual heat input usage (20%, 40 %, etc.).
- 20. Submit for this facility an operation and maintenance plan for the particulate control devices, the collection systems, and the processing systems. The Operation and Maintenance plan shall also include identification of control device(s) for each emissions unit (manufacturer, model name, number, etc.).

Coal Handling

EMISSION UNIT INFORMATION

- 21. Describe how captured dust from the baghouse (coal handling) is removed and disposed from the system. What precautions are used to minimize unconfined emissions while handling the dust?
- 22. Provide separate calculations for Coal and Petroleum Coke.

EMISSION POLLUTANT DETAIL INFORMATION:

- 23. Please clarify why the information given on emission point (stack/vent) information on the actual volumetric flow is different than the one used for the calculations on the emission pollutant detail information.
- 24. The potential emissions provided for PM in Item No. 3 do not match emission calculations provided in item No. 8 of page 28.
- 25. The potential emissions provided for PM10 in Item No. 3 do not match emission calculations provided in item No. 8 of page 28.

Raw Mill and Pyroprocessing Unit

EMISSION UNIT INFORMATION

26. Provide manufacturer specifications on the new preheater/calciner, kiln and cooler that will be installed in the facility.

- 27. Provide a manufacturer's certification that will confirm that the maximum design capacity of the kiln is 266 tons per hour of dry kiln feed and maximum production rate of 160 TPH.
- 28. Submit a detailed analysis of the components of all feedstreams. Indicate the precise mix proportion for the raw mill feed.
- 29. Please clarify why the information given on emission point (stack/vent) information on the maximum dry standard flow rate on file is different than the one used for the calculations on the emission pollutant detail information, please clarify.

EMISSION UNIT POLLUTANT DETAIL INFORMATION

- 30. Provide the reason for considering some of pollutants mentioned in the pollutant emitted as NS.
- 31. Estimate fugitive emissions from emission unit No. 1, Raw Materials Handling, (unloading of produced and purchased materials from truck and conveyor systems).
- 32. Submit a detailed analysis of the components of all feedstreams. Indicate the precise mix proportion for the raw mill feed.
- 33. Provide detail emissions calculations for PM, PM10, Sulfur dioxide and others mentioned in Maximum Annual Emissions for New Raw Mill/ Preheater/Calciner/ Kiln System-Table 2-2.
- 34. In Table 3-6 Quantifiable Fugitive Emissions was based on which year or years?
- 35. In Table 3-7 Net Change in Emissions and PSD Significant Emission Rates provide the following information
 - a. Was the Coal Handling System considered, vehicular traffic and others.
 - b. Detail emission calculations considered for: Material Handling Point and Material Handling Fugitive.

Clinker Handling

36. Please clarify why the information given on emission point (stack/vent) information on the maximum dry standard flow rate on file is different than the one used for the calculations on the emission pollutant detail information, please clarify.

Cement Storage, Packhouse and Loadout

- 37. Please clarify why two sets of calculations have been provided this emission unit.
- 38. Please clarify why the information given on emission point (stack/vent) information on the actual volumetric flow rate on file is different than the one used for the calculations on the emission pollutant detail information.

We will resume processing the application after the requested information is received. If you have any questions regarding this matter, please call Eva Kunath at (305) 372-6926.

Sincerely,

M. Eva Kunath

Air Permitting Engineer
Air Facilities Section

Air Quality Management Division

Enclosure

copy to:

A.A. Linero, P.E., Administrator, New Resource Review Section

David A. Buff, P.E., Golder Associates, Inc.





ENVIRONMENTAL RESOURCES MANAGEMENT AIR QUALITY MANAGEMENT DIVISION SUITE 900 33 S.W. 2nd AVENUE

MIAMI, FLORIDA 33130-1540 (305) 372-6925

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JUL 1 3 1998

BUREAU OF AIR REGULATION

July 7, 1998

Mr. Doug Neeley, Chief Air Programs Branch U.S. – EPA Region IV APTMD – 12th Floor Atlanta Federal Center 100 Alabama Street, S.W. Atlanta, GA 30303

Re: Conversion to Dry Process Cement TARMAC AMERICA, Inc. File No. 0250020-008-AC

Dear Mr. Neeley:

Attached are two copies of the application to replace the existing three wet process kilns for a new dry process kiln system. Please provide your comments in the following areas:

- 1. Applicability of PSD. Note that the project is similar in scope to that described in the Puerto Rico Cement Division.
- 2. Applicability of NSPS. At first glance, the project appears to meet the reconstruction definition given in 40 CFR 60.15.
- 3. Applicability of MACT. As a major source of hydrogen chloride, the facility could be subject to the recently proposed regulations

cc. Lennon andust, BAR John Aluni, DDO

If you have any questions regarding this matter, please call Eva Kunath at (305) 372-6926.

Sincerely,

M. Eva Kunath, Permitting Engineer Air Facilities Section

Air Quality Management Division

cc: David A. Buff, PE John Bunyak, NPS Scott Quaas Cindy Philips Theresa Heron



Department of Environmental Protection

Lawton Chiles Governor Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Virginia B. Wetherell Secretary

March 5, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Scott Quaas, Environmental Manager Tarmac America, Inc. 455 Fairway Drive Deerfield Beach, Florida 33441

Re: Permit Application for Kiln No. 2 Indirect Firing Modification (0250020-007-AC)

Dear Mr. Quaas:

The Department's Bureau of Air Regulation in Tallahassee will be processing Tarmac's application to install a pulverized coal bin with associated transfer equipment and a baghouse for the conversion of Kiln No. 2 to indirect firing.

According to the agreement between Metro-Dade DERM and Tarmac, the BACT limits in permit AC 13-169901 (PSD-FL-142) will apply when the indirect firing retrofit project has been completed. Therefore, there is no need to do another BACT determination and the emission limits will be the same as before. An event that would trigger a PSD application and a new BACT determination would be a modification such as a production increase resulting in PSD-significant increases in emissions. The new coal bin baghouse emissions will be well below PSD-significant levels.

Since the expiration date of AC 13-169901 has passed, the new construction permit should encompass the entire Kiln No. 2 operation (i.e., more than just the new coal bin and baghouse) so that performance tests are required to demonstrate compliance after the retrofit is done. This means that the application must show complete pollutant information and should contain more drawings and a detailed description of the work to be performed. We note a minor error in the calculation of emissions on page III. Part 9b-1 field 8 (3.94 lb/hour should be 0.94 lb/hour). Amendments to the Title V permit will be required as well. As far as the fee is concerned, it is sufficient for the new baghouse emission increase (less than five tons per year) and since we are not requiring a new BACT review there is no need for a higher fee.

Processing of the application will be continued upon receipt of the requested information. If any further input is required we will advise you by March 17. If there are any further questions, please contact me or John Reynolds at 850/488-1344.

A. A. Linero, P.E. Administrator New Source Review Section

AAL/JR

c: I. Goldman, SED

B. Beals, EPA

D. Buff, Golder Assoc.

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