PERMIT CONDITIONS

ARIZONA MATERIALS, LLC

PERMIT NUMBER 23##

DATE ISSUED: ##/##/2023
REVISION NO.: 0.0.0.0
REVISION DATE: 00/00/0000
EXPIRATION DATE: 11/16/2026

ORIGINAL PERMIT ISSUED: 11/16/2016

The owner/operator (Permittee) shall comply with the provisions of Gila River Indian Community (GRIC) Code: Title 17 Chapter 9; the Code of Federal Regulations (CFR) Title 40, Part 60, as applicable; and any other applicable Federal requirements not specifically stated herein. It is the responsibility of the Permittee to identify and comply with all local and Federal requirements that apply to the operation and maintenance of the permitted facility. Compliance with the provisions of this Permit shall not relieve any person subject to the requirements of GRIC Code Title 17 Chapter 9 from complying with any other standards including 40 C.F.R., Part 60 and Part 63. In such case, the more stringent standard shall apply.

GRIC Code: Title 17 Chapter 9; CFR Title 40, Part 60, as applicable; and any other applicable Federal requirements not specifically stated herein are hereinafter referred to as the "Rules." In addition, the terms "Part" and "Section" refer to GRIC Code: Title 17 Chapter 9. In the event that these Rules are revised to change the content and numerical references during the term of this Permit, the revised Rules and numbering system will apply to this Permit.

The term "Director" shall refer to the Director of the GRIC Department of Environmental Quality (DEQ). The term "Administrator" shall refer to the Director or Administrator of the United States Environmental Protection Agency (EPA).

GENERAL CONDITIONS:

1. **Affirmative Defense:**

    a. Affirmative defenses are established for certain emissions in excess of an emission standard or limitation and apply to all emission standards or limitations **except** for standards or limitations:

        i. Promulgated pursuant to Sections 111 or 112 of the Act;

        ii. Promulgated pursuant to Titles IV or VI of the Act;

        iii. Included in the Permit to meet the requirements of GRIC Code: Title 17 Chapter 9, Part I, Section 4.0.

b. Affirmative Defense for Malfunctions.

i. Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The Permittee with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition 21(c) of this Permit and has demonstrated all of the following:

1) The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;

2) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

3) If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

4) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

6) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

7) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards that could be attributed to the emitting source;

8) The excess emissions did not stem from any activity or event that could have been foreseen and avoided, and could not have been avoided by improved operations and maintenance practices;

9) All emissions monitoring systems were kept in operation, if practicable; and

10) The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

c. Affirmative Defense for Startup and Shutdown.

i. Except as provided in Section [c.ii] of this Permit Condition, and unless otherwise provided for in this Permit, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The Permittee with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition 21(c) and has demonstrated all of the following:

1) The excess emissions could not have been prevented through careful and prudent planning and design;

2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards that could be attributed to the emitting source;

7) All emissions monitoring systems were kept in operation if at all practicable; and

8) The Permittee's actions in response to the excess emissions were

documented by contemporaneous records.

ii. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Section [b] of this Permit Condition.

d. Affirmative Defense for Malfunction During Scheduled Maintenance.

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Section [b] of this Permit Condition.

e. Demonstration of Reasonable and Practicable Measures.

For an affirmative defense under Sections [b] and [c] of this Permit Condition, the Permittee shall demonstrate, through submission of the data and information required by this condition and Condition 21(c), that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

[Part II, Section 5.8]

f. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

[Part II, Section 4.4(A)(9)]

2. **Certification of Truth and Accuracy:**

Any document submitted pursuant to this Permit or the Rules shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this Permit or the Rules shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[Part II, Section 3.4]

3. **Compliance Plan**

If requested by the Director in writing, the Permittee shall submit to the Director a compliance plan containing a description of the compliance status of the source with respect to all applicable requirements. If the compliance plan declares that the source is not in compliance with an applicable requirement, a narrative of how the source will achieve compliance and a schedule of compliance including an enforceable sequence of actions with milestones shall also be submitted.

[Part II, Sections 4.3(F) and 4.4(A)]

4. **Confidentiality Claims:**

a. Any records, reports or information obtained from the Permittee pursuant to this Permit or the Rules, including reports or information obtained or prepared by the Department, shall be available to the public, except that the information or any part of the information shall be considered confidential upon the showing of either of the following:

i. A showing, satisfactory to the Director, by the Permittee that the information or a part of the information if made public would divulge the trade secrets of the Permittee.

ii. A determination by the GRIC attorney that the disclosure of the information or a particular part of the information would be detrimental to an ongoing criminal investigation or to an ongoing or contemplated civil enforcement action under the Rules in Tribal Court.

b. A notice of confidentiality submitted pursuant to Section [a.i] of this Permit Condition shall:

i. Precisely identify the information in the documents submitted which is considered confidential.

ii. Contain sufficient supporting information to allow the Director to evaluate whether such information satisfies the requirements related to trade secrets or, if applicable, how the information, if disclosed, is likely to cause substantial harm to the person's competitive position.

c. Notwithstanding Sections [a.i] and [a.ii] of this Permit Condition, the following information shall be available to the public:

i. The name and address of the Permittee.

ii. The chemical constituents, concentrations and amounts of any emission of any air contaminant.

iii. The existence or level of concentration of an air pollutant in the environment.

d. Notwithstanding Sections [a.i] and [a.ii] of this Permit Condition, the Director may disclose, with an accompanying confidentiality notice, any records, reports or information obtained by the Director or the Department to:

i. Other Community employees concerned with administering this Permit, or if the records, reports or information are requested for any administrative

or judicial proceeding under this Permit or the Rules.

ii. Employees of the EPA if the information is necessary or required to administer and implement or comply with Federal statutes or regulations.

[Part II, Section 10.1(A)]

5. **Controls:**

Except as provided by this Permit or the applicable Rules, the Permittee shall not operate any equipment or process unless air pollution controls, as required by this Permit or the Rules, are in place, are operating without bypass, and are operating within their design parameters, as identified in an approved O&M Plan, and in accordance with any other conditions specified in this Permit. The Permittee shall properly operate and maintain the emission control devices at all times.

[Part II, Section 4.4(A)(2)]

6. **Duty to Comply:**

a. The Permittee shall comply with all conditions of this Permit including all applicable requirements of the Rules.

b. Any Permit noncompliance constitutes a violation of the Rules and is grounds for: enforcement action under Part III (Enforcement Ordinances); permit termination or revision; or denial of a permit renewal application. In addition, noncompliance with any Federally enforceable requirement constitutes a violation of the Act.

[Part II, Section 4.4(A)(9)]

7. **Duty To Provide Information**

The Permittee shall furnish to the Director, within a reasonable time, any information that the Director 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 Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

[Part II, Section 4.4(A)(3)]

8. **Duty to Supplement or Correct Application:**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected

information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to issuance of a draft permit.

[Part II, Section 4.3(D)]

9. **Fees:**

The Permittee shall pay the applicable fees required, as set forth in Part II, Section 11.0.

[Part II, Sections 4.5 and 11.0]

10. **Fugitive Dust:**

a. The Permittee shall take all reasonable precautions to prevent fugitive dust and fugitive particulate matter emissions and shall maintain and operate the source to minimize fugitive dust and fugitive particulate matter emissions in accordance with Part V, Section 2.0, Subsection 3.0 and any dust control plan required under this Permit.

[Part V, Section 2.0, Subsection 3.0]

b. Under no circumstances shall the Permittee allow any source of fugitive dust or fugitive particulate matter visible emissions to exceed twenty (20) percent opacity.

[Part V, Section 2.0, Subsection 3.1(A)]

11. **Leased/Rented/Borrowed Equipment:**

If the Permittee leases, rents or lends any equipment covered by this Permit to a second party, the Permittee shall provide the second party with a copy of this Permit. It is the responsibility of the person using the equipment to make sure that the equipment is properly permitted and operated. If the Permittee does not provide the second party with a copy of this Permit, both the Permittee and the second party shall be responsible for operating the source in compliance with the Permit and for any violation thereof.

[Part II, Section 4.4(A)]

12. **Maintenance:**

The Permittee shall keep all equipment under this Permit in good working order through an active maintenance program established in accordance with the approved O&M Plan or, in its absence, with manufacturers' recommendations.

[Part II, Section 4.4(A)(3)]

13. **Nuisance:**

a. The Permittee shall not cause, permit, or allow the emission of particles or any contaminants in sufficient amounts or of such duration from any process as to be injurious to humans, animals, plants, or property, or to be a public nuisance, or create a condition of air pollution.

b. The Permittee shall not cause or permit the handling or transporting or storage of any material in a manner which allows or may allow unnecessary amounts of particulate matter to become airborne.

c. When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance to property other than that from which it originated or to violate any other provision of this Permit, the Director may order such corrected in a way that all air and gases or air and gasborne material leaving the building or equipment are controlled or removed prior to discharge to open air.

[Part II, Section 4.4(A)(2)]

14. **Performance Testing:**

a. If a performance test or such other method of confirming compliance with applicable requirements as specified by the Director or Administrator is required by the Permit or other Federal standard (e.g., New Source Performance Standard - NSPS, National Emission Standard for Hazardous Air Pollutants – NESHAP, etc.), the Permittee shall conduct the performance test or other compliance methodology and submit the written results of such tests to the Administrator and/or Director as required. Unless otherwise specified in this Permit or by more stringent Federal requirements, the performance test shall be conducted within sixty (60) days after a source has achieved the capability to operate at its maximum production rate on a sustained basis, but no later than one hundred eighty (180) days after initial startup or the date of permit issuance for an existing source.

b. Performance tests or other compliance confirmation methodology shall be conducted under such conditions as specified in this Permit or as specified by the Director or Administrator. A performance test shall consist of three separate runs using the applicable test method. The Permittee shall provide the following for the performance test:

i. Sampling ports adequate for the test methods applicable to the source;

ii. Safe sampling platforms and safe access to such platforms;

iii. Utilities for sampling and testing equipment.

c. The Permittee shall provide written notice to the Department at least two (2) weeks prior to scheduled performance testing.

[Part II, Section 4.4(A)(10)]

15. **Permit Term:**

a. A non-Title V permit term shall be no more than five (5) years starting from the date of the original Permit. This Permit shall remain in effect for no more than five (5) years, but may terminate sooner depending on the date of the original permit.

[Part II, Sections 4.4(A)(1) & 4.5(B)]

b. The Permittee shall submit an application for renewal of this permit at least 12 months, but not more than 18 months, prior to the date of permit expiration.

[Part II, Section 4.3(H)]

16. **Permit Revisions:**

The Permittee shall comply with the following provisions:

a. Changes Requiring a Permit Revision

i. The following changes shall require a permit revision:

1) A change that triggers a new applicable requirement or would violate an existing applicable requirement;

2) Establishment of, or change in, a voluntarily accepted emission limitation;

3) A change that will require a case-by-case determination of an emission limitation or other standard, such as BRDT, or a source-specific determination of ambient impacts, or a visibility or increment analysis;

4) A change that results in emissions that are subject to monitoring, recordkeeping or reporting under the permit if the emissions cannot be measured or otherwise adequately quantified by monitoring, recordkeeping, or reporting requirements already in this Permit;

5) A change that will authorize the burning of used oil, used oil fuel, hazardous waste, or hazardous waste fuel, or any other fuel not

currently authorized by this Permit;

6) A change that results in an increase of the potential to emit equal to or greater than twenty-five (25) tons per year of any single criteria air pollutant but which does not make the source a major source of that pollutant;

7) A change that results in either the potential emissions of any new HAP of three (3) tons per year or in an increase of the potential to emit equal to or greater than three (3) tons per year of any individual HAP or five (5) tons per year of any combination of HAPs already emitted by the facility;

8) Changes that result in the potential emissions of any new ultrahazardous air pollutant equal to or greater than three hundred (300) pounds per year or result in an increase in the source's potential to emit equal to or greater than three hundred (300) pounds per year of any ultrahazardous air pollutant or combination of ultrahazardous air pollutants;

9) Replacement of an item of air pollution control equipment listed in this Permit with one that does not have the same or better pollutant control efficiency;

10) Increasing operating hours or rates of production above the permitted level; and

11) A change that relaxes monitoring, recordkeeping, or reporting requirements, except when the change results:

(a) From removing equipment that results in a permanent decrease in actual emissions if the Permittee keeps on-site records of the change in a log that is in a form acceptable to the Department and if the requirements that are relaxed are present in the permit solely for the equipment that was removed; or

(b) From a change in an applicable requirement.

[Part II, Section 5.1(A)]

ii. The Permittee may make any physical change or change in the method of operation without revising this Permit unless the change is specifically prohibited in this Permit or is a change specifically described in Section [a.i] of this Permit Condition as requiring a permit revision. A change that does not require a permit revision may still be subject to the other

requirements in Section [b] of this Permit Condition.

[Part II, Section 5.1(B)]

iii. A significant permit revision shall be subject to the public participation requirements of Part II, Section 4.6.

[Part II, Section 5.1(C)]

iv. If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112.d of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

[Part II, Section 4.4(A)(2)(d)]

b. Changes Not Requiring a Permit Revision:

i. Except for a physical change or change in the method of operation requiring a permit revision under Section [a.i] of this Permit Condition, or a change subject to logging or notice requirements under this Section, a change shall not be subject to revision, notice or logging requirements under Part II.

ii. Except as otherwise provided in the conditions applicable to a voluntary accepted emission limit created under Part II Section 4.2(C), the following changes may be made if the Permittee keeps on-site written records of the date the change occurred and a description of the change:

1) Implementing an alternative operating scenario, including raw materials changes;

2) Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;

3) Engaging in any new insignificant activity; and

4) Replacing an item of air pollution control equipment listed in this Permit with an identical (same model, different serial number) item. The Director may require verification of the control efficiency of the new equipment by performance tests.

5) A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce

the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

iii. Except as provided in the conditions applicable to a voluntarily accepted emission limitation created under Part II Section 4.2(C), the following changes may be made if the Permittee provides written notice to the Department in advance of the change as provided below:

1) Replacing an item of air pollution control equipment listed in this Permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: seven (7) days. The Director may require verification of the control efficiency of the new equipment by performance tests;

2) A physical change or change in the method of operation that increases actual emissions more than ten (10) tons per year or ten (10) percent of the major source threshold for any criteria pollutant, whichever is less, but does not require a permit revision: seven (7) days;

3) Replacing an item of air pollution control equipment listed in this Permit with one that is not substantially similar but that has the same or better control efficiency: thirty (30) days. The Director may require verification of the control efficiency of the new equipment by performance tests;

4) A change that would trigger an applicable requirement that already exists in this Permit: thirty (30) days unless a different notice period is otherwise required by the applicable requirement.

iv. For each change under Section [b.iii] of this Permit Condition, the written notice shall be by certified mail or hand delivery and shall be received by the Director within the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notification shall include:

1) When the proposed change will occur;

2) A description of the change;

3) Any change in emissions of regulated air pollutants; and

4) Any permit term or condition that is no longer applicable as a result of the change.

v. The Permittee may implement any change in Section [b.iii] of this Permit Condition without the required notice by applying for a minor permit revision and complying with application requirements for a minor permit revision.

vi. Notwithstanding any other provision of Section [b] of this Permit Condition, the Director may require this Permit to be revised for any change that, when considered together with any other changes submitted by the Permittee under this subsection over the term of this Permit, constitute a change requiring a permit revision under Section [a.i] of this Permit Condition.

vii. If a change is described under both Sections [b.ii] and [b.iii] of this Permit Condition, the Permittee shall comply with Section [b.iii]. If a change is described under both Sections [b.iii] and [a.ii] of this Permit Condition, the Permittee shall comply with Condition [a.ii].

viii. A copy of all logs required under Section [b.ii] of this Permit Condition shall be filed with the Director within thirty (30) days after each anniversary of this Permit issue date. If no changes were made that require logging, a statement to that effect shall be filed instead.

[Part II, Section 5.2]

c. Minor Permit Revisions

i. The Permittee shall submit a minor permit revision for the following changes:

1) A change that triggers a new applicable requirement if all of the following apply:

(a) The increase in the potential to emit is less than the smaller of twenty-five (25) tons per year or the significant level defined in Part II Section 1.0;

(b) A case-by-case determination of an emission limitation or other standard is not required; and

(c) The change does not require the Permittee to obtain a Title V

permit.

2) Increasing operating hours or rates of production above the permitted level unless the increase otherwise creates a condition that requires a significant permit revision under Part II Section 5.5;

3) A change in fuel from fuel oil or coal, to natural gas or propane, if not authorized in this Permit;

4) A change that results in emissions subject to monitoring, recordkeeping, or reporting and that cannot be measured or otherwise adequately quantified by monitoring, recordkeeping, or reporting requirements already in this Permit if the revision requires monitoring, recordkeeping and/or reporting that provides the required quantification; or

5) Replacement of an item of air pollution control equipment listed in this Permit with one that has the same or better control efficiency. The Director may require performance testing to verify the control efficiency of the new control equipment.

ii. An application for minor permit revision shall be on an application form prescribed by the Department and shall include the following:

1) A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs; and

2) Certification by a responsible official, consistent with standard permit application requirements, that the proposed revision meets the criteria for use of minor permit revision procedures.

iii. The Permittee may make the change proposed in its minor permit revision application immediately after it files the complete application. After the Permittee makes the change allowed by the preceding sentence, and until the Director takes any of the actions specified in Part II Section 5.4(C), the Permittee shall comply with both the applicable requirements governing the change and the proposed revised permit terms and conditions. During this time period, the Permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the Permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to revise may be enforced against it.

iv. Notwithstanding any other provision of this Permit Condition, the Director may require the Permit to be revised as a significant permit revision for any change that, when considered together with any other changes submitted over the life of this Permit, do not satisfy Section [c.i] of this Permit Condition.

[Part II, Section 5.4]

d. Significant Permit Revisions

i. The Permittee shall make the following changes only after this permit is significantly revised in accordance with the requirements of Part II, Section 5.5 sections B through D:

1) Establishing or revising a voluntarily accepted emission limitation or standard in accordance with Part II Section 4.2(C);

2) Making any change in fuel not authorized by this Permit, except when changing from fuel oil or coal to natural gas or propane;

3) A change to or addition of an emissions unit that will result in an increase in the potential to emit of a regulated pollutant equal to or greater than either twenty-five (25) tons per year or the significance level defined in Part II Section 1.0, whichever is less;

4) A change that relaxes monitoring, recordkeeping, or reporting requirements, except when the change results from:

(a) Removing equipment that results in a permanent decrease in actual emissions. If the Permittee keeps on-site records of the change in a log that satisfies the requirements in Section [b] of this Permit Condition and if the requirements that are relaxed are present in this Permit solely for the equipment that was removed; or

(b) A change in an applicable requirement.

5) A change that will cause the Permittee to violate an existing applicable requirement;

6) A change that will require any of the following:

(a) A case-by-case determination of an emissions limitation or other standard, including a determination of BRDT;

(b) A source-specific determination of ambient impacts; or

(c) A case-by-case determination of monitoring, recordkeeping, and reporting requirements.

7) A change that requires the Permittee to obtain a Title V permit.

ii. A request for a significant permit revision shall be submitted on an application form prescribed by the Department.

[Part II, Section 5.5]

e. Administrative Amendments

An administrative permit amendment is required for any of the following changes:

i. To correct typographical errors;

ii. To identify a change in the name, address, or phone number of any person identified in the permit, or provide a similar minor administrative change at the source;

iii. To require more frequent monitoring or reporting by the Permittee; and

iv. To allow for a change in ownership or operational control of a source with a non-Title V permit, provided that a written agreement containing a specific date for the transfer of permit responsibility and liability between the current and new Permittee has been submitted to the Director and the requirements of Condition 18 of this Permit are met. The written agreement shall contain the information required and be subject to the review process contained in Condition 18 of this Permit.

[Part II, Section 4.5(C)]

17. **Permit Re-openings: Revocation and Re-issuance; Termination:**

a. This Permit shall be reopened and revised under any of the following circumstances:

i. The Director or the Administrator determines that this Permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this Permit.

ii. The Director or the Administrator determines that this Permit needs to be

revised or revoked to assure compliance with the applicable requirements.

b. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such re-openings shall be made as expeditiously as practicable. Permit re-openings shall not result in a resetting of the five year permit term.

c. The Director may issue a notice of termination of this Permit when either:

i. The Director has reasonable cause to believe that this Permit was obtained by fraud or misrepresentation;

ii. The Permittee failed to disclose a material act required by the permit application form or the regulation applicable to this Permit, of which the Permittee had or should have had knowledge at the time the application was submitted; or

iii. The terms and conditions of this Permit have been or are being violated.

[Part II, Section 5.7]

18. **Permit Transfers**

a. For purposes of this section, a transfer includes a sale or conveyance to a new corporation or entity or other change in ownership of the current permit holder.

b. This Permit may be transferred to another person if the Permittee gives notice to the Department in writing at least sixty (60) days before the proposed transfer. The permit transfer notice shall contain the following:

i. The permit number and expiration date.

ii. The name, address and telephone number of the current permit holder.

iii. The name, address and telephone number of the person to receive the permit.

iv. The name and title of the individual within the organization who is accepting responsibility for the permit along with a signed statement by that person indicating such acceptance.

v. A description of the equipment to be transferred.

vi. A written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee.

vii. Provisions for the payment of any fees pursuant to Part II, Section 11.0 that will be due and payable before the effective date of transfer.

viii. Sufficient information about the proposed permit holder's technical and financial capabilities of operating the source to allow the Department to make the decision to either grant or deny the permit transfer during the 60-day review period, including:

1) The qualifications of each person principally responsible for the operation of the source.

2) A statement by the chief financial officer of the new Permittee that it is financially capable of operating the source in compliance with the law, and the information that provides the basis for that statement.

3) A brief description of any action taken against the proposed permit holder for the enforcement of any Federal or state law, rule or regulation, or any county, city or local government ordinance or Tribal law relating to the protection of the environment for five (5) years preceding the date of application.

c. The Director may deny a permit transfer if it is determined that the new owner or operator's compliance record or financial resources are such that it lacks the capability to comply with the permit.

[Part II, Section 4.7]

19. **Posting of Permit:**

a. The Permitee shall post this Permit or certificate of permit issuance (i.e., signed Permit cover page) at a location on the site where it will be clearly visible to the public.

b. A copy of this Permit shall be kept on the site and available for inspection by a representative of the Department or any person.

[Part II, Section 4.8]

20. **Record Keeping:**

a. The Permittee shall maintain accurate records as required by this Permit and by all applicable Rules. These records shall be kept in a form, which allows

easy verification of compliance with this Permit and any applicable Rules.

b. All records shall be kept for the time as specified. All records required to demonstrate that each required air pollution control device is being operated properly shall be retained for a minimum of five years.

c. All records required by this Permit shall be made available for inspection upon request by a representative of the Director.

d. Upon request, the Permittee shall furnish to the Director copies of records required to be kept by this Permit within 48 hours.

[Part II, Section 4.4(A)(3)]

21. **Reporting**

a. Certification of Compliance

i. The Permittee shall submit to the Director, no later than March 15 of each year, annual written certification that the permitted source is in operation and was in compliance with this Permit during the previous calendar year.

[Part II, Section 4.4(A)(6)]

ii. The compliance certifications shall include the following:

1) Identification of each term or condition of this Permit that is the basis of the certification;

2) Identification of the methods or other means used by the Permittee for determining the compliance status with each condition of this Permit during the certification period, and whether the methods or other means provide continuous or intermittent data;

3) The status of compliance with the terms and conditions of this Permit for the period covered by the certification;

4) All instances of deviations from permit requirements and a description of those deviations including their cause and actions taken in response to the deviation;

5) Other facts the Director may require to determine the compliance status of the source.

iii. A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit

issuance.

[Part II, Section 4.4(A)(3)]

b. Emissions Inventory

A responsible official for the Permittee shall complete and submit to the Department an annual emissions inventory on a form prescribed by the Director. The emissions inventory is due on March 31 of each year and shall cover emissions from the previous calendar year. The emissions inventory shall be determined using the actual emissions and shall be based on the measured data or emissions factors specified on the emissions inventory form.

[Part II, Section 4.4(A)(7)]

c. Excess Emissions Report

The Permittee shall report to the Director any emissions in excess of the limits established by this Permit or the Rules to the Director.

i. The report shall be in two parts as specified below:

1) Notification by telephone or facsimile within twenty-four (24) hours of the time the Permittee first learned of the occurrence of excess emissions that includes all available information from Section [c.ii] of this Permit Condition.

2) Detailed written notification by submission of an excess emissions report within seventy-two (72) hours of the notification under Section [c.i.1] of this Permit Condition.

ii. The excess emissions report shall contain the following information:

1) The identity of each stack or other emission point where the excess emissions occurred;

2) The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

3) The time and duration or expected duration of the excess emissions;

4) The identity of the equipment from which the excess emissions emanated;

5) The nature and cause of the emissions;

6) The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunctions;

7) The steps that were or are being taken to limit the excess emissions; and

8) If this Permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.

iii. In the case of continuous or recurring excess emissions, the notification requirements of this Permit Condition shall be satisfied if the Permittee provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the emissions as originally reported shall require additional notification pursuant to Sections [c.i] and [c.ii] of this Permit Condition.

[Part II, Section 5.9]

d. Compliance Schedule

For any excess emission or permit deviation that cannot be corrected with 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with terms or conditions of this Permit that have been violated.

[Part II, Section 4.4(A)(3)]

22. **Rights and Privileges:**

This Permit does not convey any property rights or any exclusive privileges to the Permittee.

[Part II, Section 4.4(A)(9)(c)]

23. **Right to Entry**

The Permittee shall, upon presentation of credentials and other documents as may be required by law, allow the Director or his or her designee or the U.S. EPA to

perform the following at a reasonable time of day and in accordance with reasonable safety standards:

a. Enter the premises where a permitted source is located or emissions-related activity is conducted, or where records required by this Permit are kept;

b. Have access to and copies made of any records that are required to be maintained by the Rules or this Permit;

c. Inspect any operations, processes, emissions units (including monitoring and air pollution control equipment), or practices regulated or required under this Permit; and

d. Sample or monitor substances, parameters or emissions for the purpose of determining compliance with this Permit and applicable requirements.

[Part II, Section 4.4(A)(5)]

24. **Severability**

The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected by the invalid provision.

[Part II, Section 4.4(A)(8)]

25. **Visible Emissions**

The Permittee shall not discharge into the ambient air from any single source of emissions, any air contaminant, other than uncombined water, in excess of twenty (20) percent opacity.

[Part VI, Section 1.0, Subsection 3.1]

SPECIFIC CONDITIONS:

26. **Allowable Emissions**

a. The Permittee shall not allow emissions into the atmosphere in excess of any of the following:

Table 1. Emission Limits (pounds)

Pollutant	Twelve Month Rolling Total
Volatile Organic Compounds (VOC)	700
Particulate Matter ≤ 10 Micron Diameter (PM_{10})	13,000
Particulate Matter (PM)	44,400
Total Hazardous Air Pollutants (HAPs)	100

b. The 12-month rolling total emissions shall be calculated monthly within 15 days following the end of each calendar month by summing the emissions over the most recent 12 calendar months. Monthly emissions shall be calculated using the daily throughput from the operational days within the month and the results of the most recent performance test approved by the Department, and shall not exceed the values presented in Table 1. If performance test results are not available, the daily emissions shall be calculated using the calculation methods in the Technical Support Document for this permit as follows:

i. **Concrete Batch Plant:** Emissions from the concrete batch plants shall be calculated using the emission factors from the appropriate tables in EPA AP-42, Chapter 11.12: *Concrete Batching* and the grain loading requirements in Condition 28(a)(v) of this Permit.

c. For the purposes of calculating emissions required by Section [b] of this Permit Condition, only emissions from point sources shall be counted.

[Part II, Section 4.4(A)(2)]

27. **Allowable Production Rate**

a. The Permittee shall not produce more than **4,800** cubic yards of concrete per day and **1,605,008** cubic yards of concrete per 12 consecutive-month period in the batch plant.

[Part II, Section 4.4(A)(2)]

28. **Process Emission Limitations**

a. The Permittee shall not cause, permit or allow to be discharged into the ambient air:

i. Visible emissions from any material handling system, conveyance system transfer point, storage silo, surge bin, screening operation, or nonmetallic mineral loading/unloading operation associated with a capture and collection system and vented through a stack exceeding seven (7) percent opacity.

ii. Visible emissions from any conveying transfer point exceeding seven (7) percent opacity.

iii. Fugitive emissions from any affected operation or process exceeding ten (10) percent opacity, except as provided in Section [a.iv] of this Permit Condition.

iv. Fugitive emissions from truck dumping of nonmetallic minerals into a screening operation or feed hopper exceeding twenty (20) percent opacity.

v. PM emissions from any material handling system, conveyance system transfer point, storage silo, surge bin, screening operation, or nonmetallic mineral loading/unloading operation associated with a capture and collection system and vented through a stack exceeding 0.02 grain per dry standard cubic foot (gr/dscf) or 0.05 gram per dry standard cubic meter (g/dscm).

[Part VII, Section 3.0, Subsections 3.1 & 3.2]

b. Compliance Determination:

i. Compliance with Opacity Limitations

1) Compliance with opacity limitations in Section [a] of this Permit Condition shall be determined using Method 9, 40 C.F.R. Part 60, Appendix A, except the opacity observations for intermittent visible emissions shall require twelve (12) rather than twenty-four (24) consecutive readings at fifteen (15) second intervals. Alternatively, Method 22 may be used if approved by the Department, in writing, pursuant to a complete source monitoring/test protocol.

2) At least once per month, the Permittee shall provide for a certified opacity observer to conduct visible emissions readings in

accordance with EPA Method 9 at the locations prescribed below while the equipment is in operation:

(a) Exhaust stack of all air pollution control equipment (e.g., baghouse stack, passive baghouses on storage silos etc.)

(b) All material transfer points (conveyor belts, loading of mixer trucks)

3) The Permittee shall log visible emission readings on standard visible emission reporting forms and keep the logs onsite and available for review at all times.

[Part VII, Section 3.0, Subsection 7.2]

ii. Compliance with Grain Loading (PM emissions)

Compliance with PM emission limitations in Section [a] of this Permit Condition shall be determined by performance testing in accordance with performance testing requirements in Condition 32 of this Permit.

[Part VII, Section 3.0, Subsection 7.1]

29. **Controls**

a. The Permittee shall implement the following process controls:

i. On all cement and cement supplement (e.g., fly-ash) storage silo(s), install an operational overflow warning system/device. The system/device shall be designed to alert operator(s) to stop the loading operation when the cement, and/or fly-ash storage silo(s) are reaching a capacity that could adversely impact pollution abatement equipment.

ii. On all cement and cement supplement (e.g., fly-ash) storage silo(s), install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.02 gr/dscf.

iii. On dry mix concrete plant loading stations/truck mixed product, implement one of the following process controls:

1) Install a rubber fill tube;

2) Install a water spray;

3) Install a properly sized fabric filter baghouse or delivery system;

4) Enclose mixer loading stations such that no visible emissions occur; or

5) Conduct mixer loading stations in an enclosed process building such that no visible emissions from the building occur during the mixing activities.

iv. On cement and cement supplement silo filling processing/loading operations controls, install a pressure control system designed to shut-off cement silo filling processes/loading operations, if pressure from delivery truck is excessive, as defined in the O&M Plan.

[Part II, Section 4.4(A)(2)] [Part VII, Section 3.0, Subsection 3.0]

b. If the material processed in the aggregate equipment does not contain sufficient moisture to prevent visible emissions in excess of the limits in Condition 28(a) of this Permit, then the Permittee shall implement process controls described in Sections [b.i] and [b.ii] of this Permit Condition or shall implement process controls described in Sections [b.iii] of this Permit Condition;

i. Permanently mount watering systems (e.g., spray bars or an equivalent control) at the outlet of all shaker screens and material transfer points (e.g., conveyors, loading/unloading areas, etc.), excluding wet plants.

ii. Operate watering systems (e.g., spray bars or an equivalent control) on the points listed in Section [b.i] of this Permit Condition to minimize fugitive dust emissions from any material handling system.

1) The watering systems shall be maintained in good operating condition, as verified by daily inspections.

2) The Permittee shall investigate and correct any problems before continuing and/or resuming operations.

iii. Enclose and exhaust the regulated process to a properly sized fabric filter baghouse.

[Part VII, Section 3.0, Subsection 4.0][Part II, Section 4.4(A)(2)]

30. **Operational Restrictions**

a. The use of crushers is not authorized by this permit.

b. The use of fuel burning equipment with a burner rating greater than or equal to 300,000 Btu/hr is not authorized by this permit.

c. The Permittee shall use only Natural Gas or Liquid Petroleum Gas (LPG) as a burner fuel for the water heater. The use of Diesel, On Specification (On-Spec) Used Oil or "non-specification used oil", as defined in Part VII, Section 3.0, Subsection 2.0, for burner fuel is prohibited.

d. The use of an open-top vapor degreaser, conveyorized degreaser, or cleaner equipped with a lip exhaust is prohibited.

[Part II, Section 4.4(A)(2)]

31. **Recordkeeping and Reporting Requirements:**

a. Recordkeeping:

i. A daily record of plant operational data shall be kept for each day that a plant is actively operating. Records shall include the following:

1) Production Data:

(a) Hours of operation for concrete batch plant.

(b) Type of batch operation(s).

(c) Throughput per day of all basic raw materials including sand, aggregate, cement, fly ash etc. (tons/day).

(d) Volume or weight of final and intermediate products produced per day (e.g., concrete).

2) Control and Monitoring Device Data:

(a) Baghouse records shall include dates of inspection, dates and designation of bag replacement, dates of service or maintenance, related activities, static pressure gauge (manometer) readings once per eight-hour shift.

(b) Records of time, date and cause of all control device failures and down time shall also be maintained.

[Part VII, Section 3.0, Subsection 6.0]

ii. Emission Control System (ECS) O&M Plan Records:

1) Maintain a record of the periods of time that an approved ECS is utilized to comply with these Conditions. Key system parameters, such as flow rates, pressure drops, and other conditions necessary

to determine if the control equipment is functioning properly, shall be recorded in accordance with an approved O&M Plan. The records shall account for any periods when the control system was not operating. The Permittee shall also maintain results of the visual inspection and, if necessary, shall record any corrective action taken.

[Part VII, Section 3.0, Subsection 6.0]

iii. For degreasing and solvent metal cleaning operations:

1) The Permittee shall maintain a current list of cleaning-solvents being utilized and state the VOC-content of each in pounds VOC per gallon of material or grams per liter of material.

2) The Permittee shall maintain monthly records of the amount of cleaning-solvent used. Records of the amount of cleaning solvent used shall be updated by the last day of the month for the previous month.

(a) For purposes of recording usage, the Permittee may give cleaning-solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all the products in that group are then recorded under just one name. (In such a case, the Permittee shall also keep a separate list that identifies the product names of the particular solvents included under the group name). To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10^{th} of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.

[Part VI, Section 3.0, Subsection 8.2]

iv. Dust Control

The Permittee shall keep a daily written log recording the actual application or implementation of the control measures delineated in the approved Dust Control Plan. If a Dust Control Plan is not required, the Permittee shall compile and retain records that provide evidence of control measure application, by indicating the type of treatment or control measure, extent of coverage, and date applied. Upon verbal or written request by the Department, the log or the records and supporting documentation shall be provided within 48 hours, excluding weekends. If the Director or his/her designee is at the site where requested records are kept, the Permittee shall provide the records without delay. Records

required by this Section must be kept for a period of two (2) years.

[Part V, Section 2.0, Subsection 13.0]

b. Operational information required by Section [a] of this Permit Condition shall be kept in a complete and consistent manner on site and be made available without delay to the Department upon request.

c. Unless otherwise stated, records shall be retained for five (5) years and shall be made available to the Department upon request.

[Part VII, Section 3.0, Subsection 6.1]

d. Reporting

i. Initial compliance certification for degreasing and solvent metal cleaning operations

1) Within 60 days after the permit issuance date, the Permittee shall provide to the Department an initial compliance certification, pursuant to the requirements of Part VI, Section 3.0, Subsection 9.1.A. For solvent cleaners that are still in operation five (5) years after the date from which the initial compliance certification was provided to the Department, the Permittee shall provide an updated compliance certification within thirty (30) days of the five-year date.

[Part VI, Section 3.0, Subsection 8.1]

32. **Performance Testing:**

a. Testing Requirements:

i. If requested by the Department in writing, the Permittee shall conduct a performance test on the following control devices within 60 days after the date of the Department's request or within 60 days after the applicable equipment has achieved the capability to operate at its maximum production rate on a sustained basis, whichever occurs last. The testing deadline may be extended by the Director for good cause, but in no case shall the testing deadline, including test report submittal, extend beyond 180 days after the date of the Department's request.

1) Concrete batch plant and silo baghouse;

ii. The Permittee shall measure the PM concentration in the control device exhaust stream to demonstrate compliance with all applicable grain loading and/or emission rate requirements of this Permit.

iii. The Permittee shall measure the concentrations of PM and PM10 in the control device exhaust stream to demonstrate compliance with all applicable emission limits of these permit conditions.

iv. If testing demonstrates that actual emissions of any pollutant exceeds the emission factors specified in Condition 26(b) of this Permit, the Permittee shall submit an application for permit modification to the Department within 30 days of receiving the test results to revise the emission factors to represent actual emissions.

v. A visible emissions evaluation shall demonstrate compliance with the opacity requirements.

[Part II, Section 4.4(A)(3) & (10)]

b. Testing Criteria:

Performance tests shall be conducted and data reduced in accordance with the test methods and procedures specified unless the Director and Administrator specifies or approves minor changes in methodology to a reference method, approves the use of an equivalent test method, approves the use of an alternative method that has been determined to be acceptable for demonstrating compliance, or waives the requirement for performance tests because the Permittee has demonstrated by other means that the source is in compliance with the standard.

[Part II, Section 4.4(A)(3), (A)(10), (B)]

c. Test Methods:

i. Sampling sites and velocity traverse points shall be selected in accordance with EPA Test Method 1 or 1A.

ii. The gas volumetric flow rate shall be measured in accordance with EPA Test Method 2, 2A, 2C, 2D, 2F, or 2G.

iii. The dry molecular weight shall be determined in accordance with EPA Test Method 3, 3A or 3B.

iv. The stack gas moisture shall be determined in accordance with EPA Test Method 4.

v. PM testing shall be conducted in accordance with EPA Test Method 5. Alternatively, Method 17 may be used if approved by the Department pursuant to a complete source monitoring/test protocol.

vi. The visible emissions evaluation shall be conducted in accordance with EPA Test Method 9, except the opacity observations for intermittent visible emissions shall require twelve (12) rather than twenty-four (24) consecutive readings at fifteen (15) second intervals. Alternatively, Method 22 may be used if approved by the Department pursuant to a complete source monitoring/test protocol.

[Part VII, Section 3.0, Subsections 7.1 & 7.2]

vii. PM10 testing shall be conducted in accordance with EPA Test Methods 201A and 202. EPA Test Method 5 will be accepted in lieu of EPA Test Method 201A if the Permittee agrees to assume that all particulates are PM10.

[Part II, Section 4.4(A)(3) & (10)]

d. Operating Conditions:

Performance tests shall be conducted under representative operating conditions and all equipment shall be operated during testing in accordance with the most recently approved O&M Plan or according to its operations manual if no O&M Plan is required. The Permittee shall make available to the Director any records necessary to determine appropriate conditions for performance tests. Operations during periods of startup, shutdown, and equipment malfunction shall not constitute representative conditions for performance tests unless otherwise specified in the applicable standard or permit conditions.

[Part II, Section 4.4(A)(3) & (10)]

e. Monitoring Requirements:

The Permittee shall record all process and control equipment information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Operational parameters shall be monitored and recorded at least once every 30 minutes during each of the required test runs and documented in the test report. The operational parameters monitored shall be capable of indicating that the equipment is operating within the permitted limits, both during and after the performance tests. The Permittee shall record the production rate, temperature and baghouse pressure drop during the performance test. This and any additional operational parameters shall be identified in the test protocol and recorded during testing.

[Part II, Sections 4.4(A)(3) & (10)]

f. Test Protocol Submittal:

The Permittee shall submit a separate test protocol for each performance test to the Department for review and approval at least 30 days prior to each performance test.

[Part II, Section 4.4(A)(3)]

g. Notice of Testing:

The Permittee shall notify the Department in writing at least two weeks in advance of the actual date and time of each performance test so that the Department may have a representative attend. If there is a delay in conducting the scheduled performance test and the notification has already been submitted to the Department, the Permittee shall notify the Department in writing at least two weeks in advance of the rescheduled performance test.

[Part II, Section 4.4(A)(10)]

h. Testing Facilities Required:

The Permittee shall install any and all sample ports or platforms necessary to conduct the performance tests, provide safe access to any platforms, and provide the necessary utilities for testing equipment.

[Part II, Section 4.4(A)(10)]

i. Minimum Testing Requirements:

Each performance test shall consist of three separate test runs with each test run being at least one hour in duration unless otherwise specified in the applicable standard or in this permit. The same test methods shall be conducted for both the inlet and outlet measurements, if applicable, which must be conducted simultaneously. Emissions rates, concentrations, grain loadings, and/or efficiencies shall be determined as the arithmetic average of the values determined for each individual test run. Performance tests may only be stopped for good cause, which includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of a performance test without good cause after the first test run has commenced shall constitute a failure of the performance test.

[Part II, Section 4.4(A)(3) & (10)]

j. Test Report Submittal:

The Permittee shall complete and submit a separate test report for each

performance test to the Department within 30 days after the completion of testing.

[Part II, Section 4.4(A)(3) & (10)]

k. Compliance with Emission Limits:

Compliance with allowable emission limits and standards shall be determined by the performance tests specified in this Permit. If test results do not demonstrate compliance with the requirements of this Permit, the Permittee shall make the necessary repairs and/or adjustments to the equipment and demonstrate compliance through retesting. This will not nullify the fact that test results did not demonstrate compliance with the requirements of the permit conditions or nullify any violations that may result from this noncompliance. In addition to compliance demonstrations, test results shall be used for annual emissions inventory purposes, if applicable.

[Part II, Section 4.4(A)(2)] [Part VII, Section 3.0, Subsections 7.1 & 7.2]

l. All test extension requests, test protocols, test date notifications, and test reports required by this permit shall be submitted to the Department and addressed to the attention of the Compliance and Enforcement Manager.

[Part II, Section 4.4(A)(3) & (10)]

m. Baghouse:

The Permittee shall record the production rate, temperature and baghouse pressure drop during the performance test. This and any additional operational parameters shall be identified in the test protocol and recorded during testing.

[Part II, Sections 4.4(A)(3) & (10)]

33. **Operation and Maintenance (O&M) Plan:**

a. The Permittee shall provide an O&M Plan to the Department for approval at the time the initial permit application is submitted to the Department for an operating permit. The Permittee shall maintain a copy of the O&M Plan on-site at all times. The O&M Plan shall contain the following:

i. A description of the ECS monitoring devices, including temperatures, rates of flow, and other operating conditions necessary to determine if the air pollution control equipment is functioning properly and is properly maintained;

ii. A description of the procedures, including maintenance frequencies, to properly install and maintain these devices in calibration, in good working

order and in operation.

iii. A description of the investigative and corrective action process to be conducted, including shutdown procedures, if operating parameters are observed outside the range specified in [i] above.

b. The Permittee shall install, maintain, and calibrate monitoring devices described in the O&M Plan(s). The monitoring devices shall measure pressures, rates of flow, and/or other operating conditions necessary to determine if the control devices are functioning properly.

c. The Permittee shall fully comply with the most recent version of each O&M Plan that has been approved by the Department, including all actions, schedules and equipment operating ranges identified therein, unless otherwise notified in writing by the Department. If the O&M Plan(s) has been submitted to the Department, but has not yet been approved by the Department, then the Permittee shall fully comply with the most recent version of the O&M Plan(s) that has been submitted to the Department for approval.

[Part VII, Section 3.0, Subsection 5.1]

d. If a measurement outside the operating parameter range specified in the O&M Plan(s) is observed, the Permittee shall immediately investigate the process and control equipment performance and implement appropriate corrective action. The Permittee shall document the corrective actions applied, including date and time and the resulting measurement of the operating parameter.

e. If the Permittee or the Director determines that a control device operating parameter limit or range specified in the O&M Plan is not representative of normal and usual operation, the Permittee shall submit a revised O&M Plan to the Department for approval. The O&M Plan revision shall include a demonstration (e.g., engineering calculations with the basis of such calculations, approved performance test data, other testing/sampling data, etc.) that the control device can be properly operated and that the associated emission limit(s) and/or control efficiency can be met at the proposed operating range.

[Part II, Section 4.4(A)(2)]

34. **Open Burning**

a. The Permittee shall not conduct open burning until written authorization has been received from the Department. The written authorization may include the following requirements:

1) Burn only between the hours of 9:00 am and 3:00 pm from November

through February, and during daylight hours from March through October;

2) Burn only dry materials;

3) Notify any neighbors within one-quarter of a mile of the area where the burn will occur or any other persons that may be affected by burning operations at least twenty-four (24) hours prior to burning;

4) Have a signed copy of the burn authorization available at the site of the burn while burning is ongoing;

5) Cease burning operations during High Winds;

6) Notify the GRIC Fire Department before burning;

7) Provide fire control equipment to prevent the fire from spreading (e.g., water truck etc.); and

8) Provide the methods that will be followed to ignite, maintain and control the burning.

b. Written authorization to burn shall not be issued by the Department if the Department determines that:

1) A practical alternative to burning exists;

2) The Governor of the Gila River Indian Community determines that there is an extreme fire hazard;

3) An air quality emergency exists as described in Part I (General Provisions), Section 2.2 of Title 17, Chapter 9; or

4) The application contains a material or operation that does not meet the criteria described in this ordinance or the GRIC Fire Department uniform fire code.

c. The Permittee shall only conduct opening burning for the disposal of vegetative waste resulting from the process of land clearing, commercial development or other large scale permitted fires.

d. The Permittee shall provide the following information to the Department in writing at least 48 hours prior to conducting open burning:

1) Permittee's name, address and telephone number;

2) Location where the burning is to be conducted;

3) Type and quantity of material to be burned;

4) Date(s) when the burning is to be conducted; and

5) Permittee's signature.

e. The Permittee shall extinguish all burns when the Department of Environmental Quality, the GRIC Fire Department or the GRIC Department of Public Health makes a determination that inadequate smoke dispersion may cause a potential health problem, an adverse environmental impact, a nuisance or may be detrimental to public safety.

f. Open burning of the following materials is forbidden:

i. Garbage resulting from the processing, storage, service or consumption of food;

ii. Asphalt shingles, tar paper; plastic and rubber products;

iii. Petroleum products (such as waste crankcase oil, transmission oil and oil filters);

iv. Transformer oils;

v. Hazardous material containers including those that contained inorganic pesticides, lead, cadmium, mercury, or arsenic compounds;

vi. Tires, shredded or chopped tires;

vii. Construction debris;

viii. Debris from demolished homes and trailer homes; and

ix. Asbestos containing materials.

[Part V, Section 1.0, Subsections 3.0 & 4.0]

35. **Solvent Cleaning**

a. Solvent Handling Requirements

The Permittee shall comply with all of the following solvent handling requirements:

i. All cleaning solvents, including solvent soaked materials, shall be kept in closed leak-free containers that are opened only when adding or removing materials.

ii. Rags used for wipe cleaning shall be stored in closed containers when not in use.

iii. Each container shall be clearly labeled with its contents.

iv. If any cleaning solvent escapes from a container:

1) Wipe up or otherwise remove immediately if in accessible areas.

2) For areas where access is not feasible during normal production, remove as soon as reasonably possible.

b. Operating and Signage Requirements

i. The Permittee shall conform to the following operating requirements:

1) The solvent cleaner, ventilation system, and emission control equipment shall be installed, operated, and maintained in proper working order.

2) The solvent containers shall be free of all liquid leaks. Auxiliary cleaner equipment, such as pumps, water separators, steam traps, or distillation units shall not have any liquid leaks, visible tears, or cracks.

3) Any such liquid leak, visible tear, or crack that is detected shall be repaired within one day from discovery by the operator, or the cleaner shall be drained of all solvent and shut down until replaced or repaired.

4) Solvent cleaners shall not be operated when leaking.

5) When solvent is added to or drained from a solvent cleaner, the solvent shall be transferred using threaded or other leak-proof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

6) If distillation recovery of waste solvent is performed, solvent residues shall not contain more than twenty (20) percent solvent by weight.

7) No person shall remove or open any device designed to cover the

solvent unless processing work in the solvent cleaner or performing maintenance on the solvent cleaner.

8) Drain clean parts after cleaning for at least fifteen (15) seconds or until dripping ceases.

9) Drain cleaned material within the freeboard area so that the drained solvent is returned to the container. Parts shall be oriented for best drainage.

10) If using a solvent flow, use only a continuous, fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not cause liquid solvent to splash outside of the solvent cleaner.

11) Perform solvent agitation, where necessary, by means other than air agitation.

12) Solvent cleaning or solvent vapor cleaning of porous or absorbent materials such as sponges, cloth, leather, wood, or rope is prohibited.

13) Minimize solvent carry-out by employing the following measures:

(a) Rack workload to facilitate drainage;

(b) Degrease the workload in the vapor zone until condensation ceases;

(c) Allow workload to dry within the solvent cleaner until visually dry;

(d) For manual operation, tip out any pools of solvent remaining on the workload before removing it from the solvent cleaner.

14) A cleaner shall not be located where drafts are directed across the cleaner.

15) For those cleaners equipped with water separators, no solvent shall be visually detectable in the water exiting the water separator.

16) Operators must receive training in proper solvent cleaning procedures.

ii. Any person using a solvent cleaner must post a permanent, conspicuous label that summarizes proper operating procedures consistent with

minimizing emissions of organic solvents.

c. Equipment Requirements

i. The cold cleaning degreaser shall be equipped with the following

1) An apparatus or cover that prevents the solvent from evaporating when not processing work in the solvent cleaner.

(a) For cold cleaning degreasers, if the solvent volatility is greater than 0.3 psia (at 100 degrees Fahrenheit), the solvent is agitated, or heated, the cover should be a sliding, rolling or guillotine (bi-parting) type that can be opened and closed easily with one hand or foot. Covers for larger degreasers may require mechanical assistance, by spring loading, counterweighting or powered systems.

(b) Equipment covers and dipping or rotating baskets must be constructed of nonporous or nonabsorbent material. Covers must form a tight seal with the sides of the solvent cleaner and have no gaps or holes.

2) A facility for draining cleaned parts such that the drained solvent is returned to the container.

3) An internal drainage basket so that parts are enclosed under the cover while draining if the solvent true vapor pressure is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at one hundred (100) degrees Fahrenheit (thirty-eight (38) degrees Celsius) by ASTM D2879-92.

4) If the solvent true vapor pressure is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at one hundred (100) degrees Fahrenheit (thirty-eight (38) degrees Celsius) by ASTM D2879-92 or if the solvent is heated above one hundred twenty (120) degrees Fahrenheit (fifty (50) degrees Celsius), one of the following control measures shall be implemented:

(a) Freeboard height that gives a freeboard ratio greater than or equal to 0.7;

(b) Water cover at least 2.54 centimeters (1 inch) in depth (solvent shall be insoluble in and heavier than water); or

(c) Another system of equivalent control (as determined by the test

methods in Part VI, Section 3.0, Subsection 9.2), such as a refrigerated chiller or a carbon adsorber, approved by the Department.

5) The height of the solvent shall not exceed the manufacturer's fill-line for the machine.

d. Compliance Determination.

i. Equipment Standards.

Upon startup of a new solvent cleaner, replacement of an existing solvent cleaner with one of a different model, changing the control device used on an existing solvent cleaner, or upon request by the Department, the Permittee shall perform tests, in accordance with Part VI, Section 3.0, Subsection 9.2, and submit to the Department a compliance certification which contains the results of all tests and calculations necessary to demonstrate that the solvent cleaner will be in compliance with the applicable equipment standards.

ii. Safety Switches.

Safety switches must be tested semiannually.

[Part VI, Section 3.0]

36. **Fugitive Dust Generating Operations**

a. The Permittee shall take all reasonable precautions to prevent fugitive dust and fugitive particulate matter emissions and shall maintain and operate the source to minimize fugitive dust and fugitive particulate matter emissions. Compliance with this section is based on documented compliance with the applicable performance standards, the work practice requirements, the applicable requirements listed in Table 2 of this Permit and the reasonable precautions listed below.

i. Reasonable precautions include, but are not limited to, the following:

1) Use of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, grading of roads, or clearing of land.

2) Application of asphalt, water, or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dust.

3) Full or partial enclosure of materials stockpiles in cases where application of water or chemicals is not sufficient or appropriate to prevent particulate matter from becoming airborne. Implementation of good housekeeping practices to avoid or minimize the accumulation of dusty materials which have the potential to become airborne. This includes, but is not limited to, manual sweeping and the use of industrial vacuum cleaners.

4) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials.

5) Adequate containment during sandblasting or other similar operations.

6) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne.

7) The prompt removal from paved streets of earth or other material which does or may become airborne.

[Part V, Section 2.0, Subsection 3.1]

b. 20% Opacity Limitation

For emissions that are not already regulated by an opacity limit in this Permit, the Permittee shall not discharge or cause or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity.

[Part V, Section 2.0, Subsection 3.1]

c. Unpaved Parking Lots

For any unpaved parking lot at the permitted facility with traffic exceeding twenty (20) vehicle trips per day, the Permittee shall:

i. Not allow visible fugitive dust emissions to exceed twenty (20) percent opacity.

ii. Employ one of the following control measures:

1) Apply a dust palliative approved by the Department;

2) Apply gravel at quantities sufficient to ensure that particulate emissions do not exceed twenty (20) percent opacity;

3) Paving; or

4) Employ an alternate dust control measure approved by the Department. At a minimum, an alternative dust control measure shall not allow silt loading equal to or greater than 0.33 ounces per square foot, or allow silt content to exceed eight (8) percent as determined by applicable test methods in Section [g.ii] of this Permit Condition.

iii. Maintain a silt content less than or equal to 8%.

[Part II, Section 4.4(A)(2)] [Part V, Section 2.0, Subsection 4.0]

d. Unpaved Haul/Access Road

For any unpaved haul/access road at the permitted facility, the Permittee shall:

i. Not allow visible fugitive dust emissions to exceed twenty (20) percent opacity, and shall:

1) Apply a dust palliative, including water, approved by the Department;

2) Apply water in sufficient quantities to ensure that particulate matter emissions do not exceed twenty (20) percent opacity (at a minimum, application of water must be confirmed utilizing log books on water trucks); or

3) Apply gravel at quantities sufficient to ensure that particulate matter emissions do not exceed twenty (20) percent opacity; or

4) Employ an alternate dust control measure approved by the Department. At a minimum, an alternative dust control measure shall not allow silt loading equal to or greater than 0.33 ounces per square foot (oz/ft^2), or allow silt content to exceed six (6) percent as determined by applicable test methods in Section [g.ii] of this Permit Condition.

ii. As an alternative to meeting the stabilization requirements in Section [d.i] of this Permit Condition, limit vehicle trips to no more than twenty (20) per day and limit vehicle speeds to no more than fifteen (15) miles per hour. If complying with this subsection, the Permittee must include, in a Dust Control Plan, a list of the number of vehicles traveled on the unpaved haul/access roads (i.e., number of employee vehicles, earthmoving equipment, haul trucks, and water trucks). At no time shall the Permittee allow particulate emissions to exceed twenty (20) percent opacity.

[Part V, Section 3.0, Subsection 5.0]

e. Control Measures

The Permittee shall implement control measures before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays in accordance with the Dust Control Plan and Table 2 of this Permit. Failure to comply with the provisions of Section [f] of this Permit Condition, as applicable, and/or of an approved Dust Control Plan, is deemed a violation of this Permit. Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of this Permit at all times. In addition, the Permittee is still subject to all of the requirements of this Permit, even if the Permittee is complying with the approved Dust Control Plan.

[Part V, Section 2.0, Subsection 9.0]

f. Work Practices

When engaged in the following specific activities, the Permittee shall comply with the following work practices in addition to implementing, as applicable, the control measures described in Table 2 of this Permit. Such work practices shall be implemented to meet the twenty (20) percent opacity standard of this Section and the stabilization requirements in Table 2, as determined by the applicable test method in Section [g.ii] of this Permit Condition.

i. Bulk Material Hauling Off-Site Onto Paved Public Roadways.

1) Load all haul trucks such that the freeboard is not less than three inches;

2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s);

3) Cover all haul trucks with a tarp or other suitable closure; and

4) Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

ii. Bulk Material Hauling On-Site Within the Boundaries of the Work Site.

When crossing a public roadway upon which the public is allowed to travel:

1) Load all haul trucks such that the freeboard is not less than three inches;

2) Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

3) Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Table 2: Trackout-1J, 2J, 3J.

iii. Spillage, Carry-Out, Erosion, and/or Trackout.

1) Install a suitable trackout control device (Examples of trackout control devices are described in Table 2: Trackout-1J, 2J, 3J) that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site at all exits onto a paved public roadway:

(a) From all work sites with a disturbed surface area of five acres or larger.

(b) From all work sites where one hundred (100) cubic yards of bulk materials are hauled on-site and/or off-site per day.

2) Cleanup spillage, carry-out, erosion, and/or trackout on the following time-schedule:

(a) Immediately, when spillage, carry-out, and/or trackout extends a cumulative distance of fifty (50) linear feet or more; or

(b) At the end of the work day, when spillage, carry-out, erosion, and/or trackout are other than the spillage, carryout, erosion, and/or trackout described above, in Section [f.iii.2.a] of this Permit Condition.

iv. Unpaved Haul/Access Roads

Implement 1 or more control measure(s) described in Table 2: Unpaved Haul/Access Roads-1C through 5C, before engaging in the use of or in the maintenance of unpaved haul/access roads.

v. Open Storage Piles

For the purpose of this Section, an open storage pile is any accumulation of bulk material with a five (5) percent or greater silt content which in any

one point attains a height of three feet and covers a total surface area of one hundred fifty (150) square feet or more. Silt content shall be assumed to be five (5) percent or greater unless a person can show, by testing in accordance with ASTM Method C136-96A or other equivalent method approved in writing by the Department and the Administrator of EPA, that the silt content is less than five (5) percent.

1) During stacking, loading, and unloading operations, apply water, other dust palliatives or other Department-approved dust control technologies, as necessary, to maintain compliance with Sections [a] and [b] of this Permit Condition; and

2) When not conducting stacking, loading, and unloading operations, comply with one of the following work practices:

   (a) Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or

   (b) Apply water to maintain a soil moisture content at a minimum of twelve (12) percent, as determined by ASTM Method D2216-98, or other equivalent method as approved by the Department and the Administrator of EPA. For areas which have an optimum moisture content for compaction of less than twelve (12) percent, as determined by ASTM Method D1557-91 (1998) or other equivalent method approved by the Department or the Administrator of EPA, maintain at least seventy (70) percent of the optimum soil moisture content or maintain a visible crust that complies with the test method in Section [g.ii] of this Permit Condition; or

   (c) Meet one of the stabilization requirements described in Section [a.i] of this Permit Condition; or

   (d) Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than fifty (50) percent. If implementing this Section, either Sections [f.v.2.b] or [f.v.2.c] of this Permit Condition also must be implemented; or

   (e) Maintain a visible crust that complies with the test method in Section [g.ii] of this Permit Condition.

[Part V, Section 2.0, Subsection 10.0]

g. Compliance Determination

To determine compliance with this Permit Condition, the following test methods shall be followed:

i. Stabilization Observations.

1) Unpaved Parking Lots in an Industrial/Commercial Area.

Stabilization observations for unpaved parking lots in industrial/commercial areas shall be conducted in accordance with Maricopa County Appendix C (Fugitive Dust Test Methods), Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots). When more than one (1) test method is permitted for a determination, an exceedance of the limits established in this Permit determined by any of the applicable test methods constitutes a violation of this Permit.

2) Unpaved Haul/Access Road.

Stabilization observations for unpaved haul/access roads shall be conducted in accordance with Maricopa County Appendix C (Fugitive Dust Test Methods), Section 2.1 (Test Methods For Stabilization-For Unpaved Roads And Unpaved Parking Lots). When more than one (1) test method is permitted for a determination, an exceedance of the limits established in this Permit determined by any of the applicable test methods constitutes a violation of this Permit.

ii. Test Methods Adopted By Reference:

The test methods listed in this Section are adopted by reference as of July 1, 2006. These adoptions by reference include no future editions or amendments. Copies of the test methods listed in this section are available for review at the Gila River Indian Community Department of Environmental Quality, 35 Pima Street, Sacaton, Arizona 85247.

1) Maricopa County Appendix C (Fugitive Dust Test Methods), Section 2.1 (Test Methods For Stabilization – For Unpaved Roads And Unpaved Parking Lots).

2) Maricopa County Appendix C (Fugitive Dust Test Methods), Section 2.3 (Test Methods For Stabilization – Visible Crust Determination).

3) ASTM Method C136-96A ("Standard Test Method For Sieve Analysis Of Fine And Coarse Aggregates"), 1996 edition.

4) ASTM Method D2216-98 ("Standard Test Method For Laboratory Determination Of Water (Moisture) Content Of Soil And Rock By Mass"), 1998 edition.

5) ASTM Method D1557-91(1998) ("Test Method For Laboratory Compaction Characteristics Of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3)"), 1998 edition.

6) An alternative test method approved in writing by the Director and the Administrator of the EPA.

[Part V, Section 2.0, Subsection 12.0]

h. Dust Control Plan

The Permittee shall submit a Dust Control Plan to the Department before commencing any routine dust generating operation. Failure to submit and obtain an approved Dust Control Plan prior to commencing any routine dust generating operation shall be a violation of this Permit. Compliance with this Section does not affect the Permittee's responsibility to comply with any other applicable requirements. The Dust Control Plan shall describe all control measures to be implemented before, after, and while conducting any dust generating operation, including during weekends, after work hours, and on holidays.

i. A Dust Control Plan shall, at a minimum, contain all the information described in Section [h.iii] of this Permit Condition. The Department shall approve, disapprove, or conditionally approve the Dust Control Plan, in accordance with the criteria used to approve, disapprove or conditionally approve a permit. Failure to comply with the provisions of an approved Dust Control Plan is deemed to be a violation of this Permit. Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of this Section at all times. In addition, the Permittee is still subject to all of the requirements of this Permit, even if the Permittee is complying with the approved Dust Control Plan.

ii. At least one primary control measure and one contingency control measure must be identified in the Dust Control Plan for all fugitive dust sources. Should any primary control measure(s) prove ineffective, the Permittee shall immediately implement the contingency control measure(s), which may obviate the requirement of submitting a revised Dust Control Plan.

[Part V, Section 2.0, Subsection 6.0]

iii. Elements of a Dust Control Plan

A Dust Control Plan shall contain, at a minimum, all of the following information:

1) Names, address(es), and phone numbers of person(s) responsible for the submittal and implementation of the Dust Control Plan and responsible for the dust generating operations.

2) A drawing, on at least 8½" x 11" paper, which shows:

   (a) Entire project site boundaries;

   (b) Acres to be disturbed with linear dimensions;

   (c) Nearest public roads;

   (d) North arrow;

   (e) Planned exit locations onto paved public roadways; and

   (f) The expected duration of the project.

3) Control measures or combination thereof to be applied to all actual and potential fugitive dust sources, before, after, and while conducting any dust generating operations, including during weekends, after work hours, and on holidays.

   (a) At least one primary control measure and one contingency control measure must be identified, from Table 2 to this Permit, for all fugitive dust sources. Should any primary control measure(s) prove ineffective, the Permittee shall immediately implement the contingency control measure(s), which may obviate the requirement of submitting a revised Dust Control Plan.

   (b) Alternatively, a control measure(s) that is not in Table 2 may be chosen, provided that the control measure is approved in writing by the Department and implemented by the Permittee, in accordance with the appropriate test method in Section [g.ii] of this Permit Condition.

   (c) If complying with Section [d] of this Permit Condition (Unpaved

Haul/Access Roads), the plan must include the number of vehicles traveled on the unpaved haul/access roads (i.e., number of employee vehicles, earthmoving equipment, haul trucks, and water trucks).

4) Identification of the dust suppressants to be applied, including:

   (a) Product specifications or label instructions for approved usage;

   (b) Method, frequency, and intensity of application;

   (c) Type, number, and capacity of application equipment; and

   (d) Information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

5) Specific surface treatment(s) and/or control measures utilized to control material trackout and sedimentation where unpaved and/or access points join paved public roadways.

[Part V, Section 2.0, Subsection 7.0]

iv. Dust Control Plan Revisions

If the Director determines that an approved Dust Control Plan has been followed, yet fugitive dust emissions from any given fugitive dust source under the control of the Permittee still exceed the twenty (20) percent opacity standard contained in this Permit Condition, then the Director shall issue a notice to the Permittee explaining such determination. The Permittee shall make written revisions to the Dust Control Plan as necessary to meet the twenty (20) percent opacity standard and shall submit such revised Dust Control Plan to the Director within three working days of receipt of the Director's notice, unless such time period is extended by the Director or his/her representative, for good cause. During the time that the Permittee is preparing revisions to the approved Dust Control Plan, the Permittee shall comply with all requirements of this Permit Condition.

[Part V, Section 2.0, Subsection 8.0]

TABLE 2. SOURCE TYPE AND CONTROL MEASURES

Vehicle Use In Open Areas And Vacant Lots:

1A Restrict trespass by installing signs.

2A Install physical barriers such as curbs, fences, gates, posts, signs, shrubs, and/or trees to prevent access to the area.

Unpaved Parking Lots:

1B Pave.

2B Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with Part V, Section 2, Subsection 4.0.

3B Apply a suitable dust suppressant, in compliance with Part V, Section 2, Subsection 4.0.

Unpaved Haul/Access Roads:

1C Limit vehicle speed to 15 miles per hour or less and limit vehicular trips to no more than 20 per day.

2C Apply water, so that the surface is visibly moist and Part V, Section 2.0, Subsection 5.0 is met.

3C Pave.

4C Apply and maintain gravel, recycled asphalt, or other suitable material, in compliance with Part V, Section 2.0, Subsection 5.0.

5C Apply a suitable dust suppressant, in compliance with Part V, Section 2.0, Subsection 5.0.

Disturbed Surface Areas:

Pre-Activity:

1D Pre-water site to the depth of cuts.

2D Phase work to reduce the amount of disturbed surface areas at any one time.

During Dust Generating Operations:

3D Apply water or other suitable dust suppressant, in compliance with Part V, Section 2.0, Subsection 3.0.

4D Construct fences or 3 foot - 5 foot high wind barriers with 50% or less porosity adjacent to roadways or urban areas that reduce the amount of wind blown material leaving a site. If constructing fences or wind barriers, 3D must also be implemented.

Temporary Stabilization During Weekends, After Work Hours, And On Holidays:

5D Apply a suitable dust suppressant, in compliance with Part V, Section 2.0, Subsection 9.0.

6D Restrict vehicular access to the area, in addition to the control measure described in 5D above.

Permanent Stabilization

7D Restore area such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby undisturbed native conditions.

8D Pave, apply gravel, or apply a suitable dust suppressant.

9D Establish vegetative ground cover in sufficient quantity.

TABLE 2. SOURCE TYPE AND CONTROL MEASURES

Bulk Material Handling Operations And Open Storage Piles:

During Stacking, Loading, And Unloading Operations:

1F Apply water as necessary, to maintain compliance with Part V, Section 2.0, Subsection 3.0; and

When Not Conducting Stacking, Loading, And Unloading Operations:

2F Cover open storage piles with tarps, plastic, or other material to prevent wind from removing the coverings; or

3F Apply water to maintain a soil moisture content sufficient to maintain opacity below 20%; or

4F Meet the stabilization requirements described in Part V, Section 2.0, Subsection 10.5; or

5F Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing 5F, the Permittee shall also implement 3F or 4F above.

6F Maintain a visible crust that complies with the test method in Part V, Section 2.0, Subsection 12.2(B).

Bulk Material Hauling/Transporting:

When On-Site Hauling/Transporting Within The Boundaries Of The Work Site That Involves Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

1G Load all haul trucks such that the freeboard is not less than 3 inches when crossing a public roadway upon which the public is allowed to travel while construction is underway; and

2G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

3G Install a suitable trackout control device that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of haul trucks and/or motor vehicles that traverse such work site. Examples of trackout control devices are described in Items 1J, 2J, 3J of this Table; and

When On-Site Hauling/Transporting Within The Boundaries Of The Work Site But Not Crossing A Public Roadway Upon Which The Public Is Allowed To Travel While Construction Is Underway:

4G Limit vehicular speeds to 15 miles per hour or less while traveling on the work site; or

5G Apply water to the top of the load such that the 20% opacity standard, as described in Part V, Section 2.0, Subsection 3.0, is not exceeded, or cover haul trucks with a tarp or other suitable closure.

Off-Site Hauling/Transporting Onto Paved Public Roadways:

6G Cover haul trucks with a tarp or other suitable closure; and

7G Load all haul trucks such that the freeboard is not less than 3 inches; and

8G Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and

9G Before the empty haul truck leaves the site, clean the interior of the cargo compartment or cover the cargo compartment.

TABLE 2. SOURCE TYPE AND CONTROL MEASURES

Cleanup Of Spillage, Carry Out, Erosion, And/Or Trackout:

1H Operate a street sweeper or wet broom with sufficient water, if applicable, at the speed recommended by the manufacturer and at the frequency(ies) described in the Permittee's dust control plan; or

2H Manually sweep-up deposits.

Trackout (Prevention):

1J Install a grizzly or wheel wash system at all access points.

2J At all access points, install a gravel pad at least 30 feet wide, 50 feet long, and 6 inches deep.

3J Pave starting from the point of intersection with a paved public roadway and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.

Easements, Rights-Of-Way, And Access Roads For Utilities (Electricity, Natural Gas, Oil, Water, And Gas Transmission) Associated With Sources That Have A Non-Title V Permit, A Title V Permit, And/Or A General Permit Under Part II :

Earthmoving Operations On Disturbed Surface Areas Larger Than 1 Acre:

1M If water is the chosen control measure, operate water application system (e.g., water truck), while conducting earthmoving operations on disturbed surface areas larger than one (1) acre.

Demolition Activities

An Permittee shall implement all of the following control measures:

1O Stabilize demolition debris. Apply water to debris immediately following demolition activity; and

2O Stabilize surrounding area immediately following demolition activity. Water all disturbed soil surfaces to establish a crust and prevent wind erosion of soil.

EQUIPMENT LIST
ARIZONA MATERIALS, LLC
PERMIT NUMBER 23##

Table 1. Permitted Equipment

Equipment Description	Rated Capacity (ea.)	Quantity
Concrete Batch Plant	200 cy/hr	1
Feed/Weigh Hoppers	200 tons/hr	4
Conveyor	200 tons/hr	5
Storage Silo (Cement)	200 tons	1
Storage Silo (Flyash)	200 tons	1
Elevated Storage Bin (Sand)	25 tons	1
Elevated Storage Bin (Aggregate)	25 tons	4
CON-E-CO Dust Collector/Baghouse, Model RA-140-1500	8,000 CFM	1
Safety Kleen Solvent Cleaning System	30 gal	1

Table 2. Insignificant Activities

Equipment Description	Rated Capacity (ea.)	Quantity
Aboveground Storage Tank (Diesel)	10,000 gal.	1

NON-TITLE V AIR PERMIT EVALUATION SHEET
(Technical Support Document – TSD)

PERMIT NO.: 23##

MINOR MOD. ☐
NON-MINOR MOD. ☐
RENEWAL ☒

PERMIT ENGINEER: Ryan Eberle. P.E. **DATE PREPARED:** ##/##/23

BUSINESS NAME: Arizona Materials, LLC
BUSINESS TYPE: Concrete Batch Plant

SOURCE TYPE:		**Yes**	**No**
	NSPS	☐	☒
	BACT	☐	☒
	MACT	☐	☒
	NESHAP	☐	☒
	BRDT	☐	☒
	Synthetic Minor	☐	☒

DESCRIPTION OF SOURCE

Non-Title V permit for an existing facility. The Arizona Materials, LLC (AZ Materials) is a dry-mix (a.k.a. truck-mix) concrete batch plant. Based on the information presented in the permit application, the SIC code for the facility is 3273, and the facility will operate 24 hours per day, 7 days per week, and 52 weeks per year.

The raw materials are delivered to a plant by truck or front end loader. The cement and cement supplement (flyash) are transferred to elevated storage silos pneumatically. The sand and coarse aggregate are transferred to ground storage bins by front end loader. From the ground storage bins, the sand and coarse aggregate are transferred to elevated bins by belt conveyors. From these elevated bins, the constituents are fed by gravity to a weigh hopper, which combines the proper amounts of each material. The dry materials are then loaded into the mixer truck. Water is added into the truck separate from the dry materials, and the concrete is mixed in the truck on the way to the delivery location.

The weigh hopper, cement and cement supplement storage silos, and the truck loading are equipped with emission control systems. The emissions from the weigh hopper, truck loading, and storage silos are controlled by a single baghouse.

A list of permitted equipment is included in Table 1.

Table 1. Permitted Equipment

Equipment Description	Rated Capacity (ea.)	Quantity
Concrete Batch Plant	200 cy/hr	1
Feed/Weigh Hoppers	200 tons/hr	4
Conveyor	200 tons/hr	5
Storage Silo (Cement)	200 tons	1
Storage Silo (Flyash)	200 tons	1
Elevated Storage Bin (Sand)	25 tons	1
Elevated Storage Bin (Aggregate)	25 tons	4
C&W Baghouse, Model BP-1300	8,000 CFM	1
Safety Kleen Solvent Cleaning System	30 gal	1

A list of insignificant activities is included in Table 2. Insignificant activities are defined in the Gila River Indian Community (GRIC) Code: Title 17 Chapter 9, Part II, Section 1.0 and emissions from insignificant activities are excluded from the permit.

Table 2. Insignificant Activities

Equipment Description	Rated Capacity (ea.)	Quantity
Aboveground Storage Tank (Diesel)	10,000 gal.	1

ALLOWABLE EMISSIONS

The emission limits for the facility are presented in Table 3.

Table 3. Emission Limits (pounds)

Pollutant	Twelve Month Rolling Total
Volatile Organic Compounds (VOC)	700
Particulate Matter <10 Micron Diameter (PM_{10})	13,000
Particulate Matter (PM)	44,400
Total Hazardous Air Pollutants (HAPs)	100

APPLICABLE GRIC REGULATIONS

Part II

Section 1: Definitions
Section 2: Applicability of Permit Requirements
Section 4: Non-Title V Permit Requirements
Section 5: Permit Revisions at a Non-Title V Source
Section 10: Confidentiality of Information
Section 11: Fees

Part V

Section 1: Open Burning
Section 2: General Requirements for Fugitive Dust-Producing Activities

Part VI

Section 1: Visible Emissions
Section 3: Solvent Cleaning

Part VII

Section 3: Non-Metallic Mineral Mining and Processing

FEDERAL REGULATORY APPLICABILITY

NSPS - Based on the information provided in the permit application, this source does not process non-metallic minerals, and concrete batch plants are not listed in the New Source Performance Standards (NSPS). Therefore, the source is not subject to NSPS.

NESHAP/MACT - Based on the information provided in the permit application, this source emits Hazardous Air Pollutants (HAPs) from the concrete batch plant. However, the facility (concrete batch plant) is not a specifically listed Federal National Emission Standards for Hazardous Air Pollutants (NESHAP) Source Category and is not a major source. Therefore, the source is not subject to the NESHAP or Maximum Achievable Control Technology (MACT) standards. The federal HAPs list is fully incorporated into Part II, Section 1.0, and a GRIC HAP is defined as any Federally-listed HAP.

ALLOWABLE EMISSION CALCULATIONS

For concrete batching, particulate matter (PM), consisting primarily of cement and cement supplement dust, but including some aggregate and sand dust emissions, is the primary pollutant of concern. In addition, there are emissions of metals that are associated with cement and cement supplement from concrete batching. Most of the emission points are fugitive in nature. Fugitive sources include the transfer of sand and aggregate, vehicle traffic, and wind erosion from sand and aggregate storage piles. The amount of fugitive emissions generated during the transfer of sand and aggregate depends primarily on the surface

moisture content of these materials. The point sources of emissions include those activities that are controlled (e.g., the transfer of cement and cement supplement material to silos and weigh hopper and truck loading).

The emission calculations for the facility were based on AP-42 emission factors, grain loading requirement for control devices, and material throughputs provided in the permit application. Non-fugitive emissions will be generated from the following sources:

- Weigh hopper, silos, and truck loading baghouse (1).

The calculations for the emission limits are included as an attachment to this TSD.

Major Source Determination

Based on the maximum hourly throughput of the concrete batch plant (400 tph), the facility's potential-to-emit (PTE) does not exceed the major source threshold of 10 tpy for a single HAP, 25 tpy for combined HAPs, or 100 tpy for any other regulated air pollutant (NOx, CO, SOx, VOCs, PM10, PM, etc) at a maximum annual operating time of 8,760 hours.

According to the Part II, Section 1.0 definition of "major source," the fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source unless the source is listed or is being regulated by NSPS or NESHAP. Since the facility is not listed in the definition of a major source and is not subject to NSPS or NESHAP, only non-fugitive emissions (i.e. emissions from a baghouse, dust collector, etc.) were evaluated to determine if the source will be considered a major source. Based on the calculations, the facility does not exceed the major source thresholds for criteria pollutants or HAPs.

BEST REASONABLE AND DEMONSTRATED TECHNOLOGY (BRDT) APPLICABILITY

Based on the information provided in the permit application and the attached emissions calculations, the facility does not exceed the BRDT thresholds provided in Part II, Section 4.2(A)(2). Table 4 shows the permitted facility emissions and the BRDT thresholds.

Table 4. BRDT Applicability

Pollutant	Annual Emissions (tons)	BRDT Threshold (tons)	BRDT Applicable?
Nitrogen Oxides (NOx)	N/A	>75 but <100	No
Volatile Organic Compounds (VOC)	0.30	>75 but <100	No
Carbon Monoxide (CO)	N/A	>75 but <100	No
Sulfur Oxides (SOx)	N/A	>75 but <100	No
Particulate Matter <10 Micron Diam. (PM_{10})	6.49	>75 but <100	No
Particulate Matter (PM)	22.19	>75 but <100	No
Total Hazardous Air Pollutants (HAPs)	0.01	5	No
Any Single HAP	<0.01	3	No

MODELING ANALYSIS

A modeling analysis was not conducted because facility emissions were below the BRDT thresholds.

ANALYSIS OF IMPORTANT PERMIT CONDITIONS

Condition 26: Sets the emission limits for the facility, which were established based on information provided by the Permittee in the permit application and any subsequent responses to information requests. Describes the methods to calculate emissions and the allowable emissions from the facility.

Conditions 27 through 32: Set the production limitations, visible emission limitations, control requirements, operational restrictions, recordkeeping and reporting requirements, and performance test requirements for the concrete batch plant. The production limits were based on the sum of material throughputs provided by the Permittee in the application. The visible emission limitations and control requirements reflect the policies contained in Part VII, Section 3.0. The performance test conditions establish the required testing frequency, test methods, notification and reporting requirements.

Condition 33: Sets the requirements for Operation and Maintenance (O&M) Plans for the air pollution control equipment at the facility. These conditions reflect policies contained in Part VII, Section 3.0, Subsection 5.1.

Condition 34: Sets the limitations and requirements for open burning, including a list of materials that cannot be burned. These conditions reflect policies contained in Part V, Section 1.0.

Condition 34: Sets the limitations and requirements for Solvent Cleaning. These conditions reflect policies contained in Part VI, Section 3.0.

Condition 36: Sets the limitations and requirements for fugitive dust generating operations, including, but not limited to, storage piles, track out, and haul roads. These conditions include requirements for dust control plans, emission control systems, compliance determination, monitoring and recordkeeping, control measures, and visible emission limitations, which reflect the policies contained in Part V, Section 2.0.

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Facility Operating Parameters

Note, yellow highlighted values were provided in the application

	hr/day	day/wk	wk/yr	hr/yr
Operating Schedule (CBP)	24	7	52	8760

Concrete Batch Plant (CBP) Operating Parameters

Control Equipment	Flowrate (cfm)
Truck Loading/Weigh Hopper Loading Baghouse	8,000

	Production				
	Hourly (cy/hr) (1)	Hourly (TPH) (1)	Daily (TPD) (1)	Annual (TPY) (2)	Annual (yd^3/yr) (3)
Truck Mix CBP	200	400	9,600	3,210,016	1,605,008
Facility Total	**200**	**400**	**9,600**	**3,210,016**	**1,605,008**

Notes:

1. Hourly volume provided by the applicant and defined as the capacity in the equipment list. Calculated daily throughput based on hourly rating and operating hours. For example, 400 tons/hour x 24 hrs/day = 9600 tons/day
2. Calculated annual production based on a sum of the individual materials below.
3. Assumes the density of concrete is 2 tons per cubic yard.

	Material Throughput			
	Truck Mix CBP			
Concrete Composition Material	TPD (4)	ton/yr (from application)	Ratio	ton/yr (permitted)
Coarse Aggregate	4650.47	1,555,008	48.4%	1,555,008
Sand	3709.92	1,240,512	38.6%	1,240,512
Cement	940.54	314,496	9.8%	314,496
Cement Supplement (Flyash)	299.06	100,000	3.1%	100,000
Total Dry Mix Materials	**9600.00**	**3,210,016**	100.0%	**3,210,016**
Water	0.00			0
Total Concrete	**9600.00**	**3,210,016**		**3,210,016**

Notes:

4. Fraction of total daily production. Material Daily Thoughput (tpd) = Daily Concrete Production (tpd) x [(Annual Material Throughput) / (Annual Concrete Production)]

For example (Coarse Aggregate): 9600 tons/day x (1555008 tpy / 3210016 tpy) = 4650.47 tons/day

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Facility Operating Parameters

Vehicle Type	Vehicle Weight (tons)	VMT per day (6)	VMT per year	Unpaved Road(7) %	Paved Roads(7) %
Medium Duty - Loaders	20.0	410.30	149,760	100%	0%
Heavy Duty - Concrete Trucks	35.0	347.67	126,900	0%	100%
Unpaved Roads Mean Vehicle Weight (5)	20.0				

Notes:

5. Assumes 20 ton loaders at 149,760 mi/yr on unpaved roads. Assumes 35 ton concrete trucks at 126,900 mi/yr only travel on paved road surfaces.

6. VMT (miles/day) = VMT (miles/year) / (Operating Weeks Per Year x Operating Days Per Week)

7. Based on the facility site diagram and aerial images, it appears that the concrete trucks travel on concrete-paved roads and loaders travel on dirt roads.

Sand and Aggregate Storage Piles

Storage Pile Area(8) (acres)	1

Notes:

8. Sand and aggregate storage piles, as defined in the site diagram, with a conservative area estimate using Google Earth Pro.

Solvent Usage

Annual Solvent Usage (gals)	90

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Point Source Emissions

	Concrete Batch Plant			Solvent Cleaning		
Pollutant	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)
NOx	- - -	- - -	- - -	- - -	- - -	- - -
VOC	- - -	- - -	- - -	1.65	603.00	0.30
CO	- - -	- - -	- - -	- - -	- - -	- - -
SOx	- - -	- - -	- - -	- - -	- - -	- - -
PM10	38.84	12,985.39	6.49	- - -	- - -	- - -
PM	132.70	44,371.47	22.19	- - -	- - -	- - -
HAPs	0.06	19.34	0.010	- - -	- - -	- - -

Fugitive Emissions

	Aggregate Handling			Paved Roads			Unpaved Roads			Storage Piles		
Pollutant	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)
NOx	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
VOC	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
CO	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
SOx	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
PM10	65.06	21,754.21	10.88	275.80	100,667.35	50.33	190.08	69,377.92	34.69	0.52	189.00	0.09
PM	136.14	45,523.30	22.76	1379.00	503336.76	251.67	745.80	272216.28	136.11	- - -	- - -	- - -
HAPs	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -

Total Emissions

	Point Source Emissions			Fugitive Emissions			Facility Total Emissions		
Pollutant	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)
NOx	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VOC	1.65	603.00	0.30	0.00	0.00	0.00	1.65	603.00	0.30
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PM10	38.84	12,985.39	6.49	531.46	191,988.48	96.00	570.30	204,973.87	102.49
PM	132.70	44,371.47	22.19	2,260.94	821,076.34	410.54	2,393.64	865,447.81	432.72
HAPs	0.06	19.34	0.01	0.00	0.00	0.00	0.06	19.34	0.01

Emission Limits

	Point Sources	
Pollutant	(lb/day)	(lbs/yr)
NOx	0.00	0.00
VOC	10.00	700.00
CO	0.00	0.00
SOx	0.00	0.00
PM10	40.00	13,000.00
PM	140.00	44,400.00
HAPs	1.00	100.00

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Major Source Determination

Potential-To-Emit (PTE) for Point Sources

Pollutant	Batch Plant			Total			Major Source Threshold (tpy)
	(lb/day)[1]	(lbs/yr)[2]	(tons/yr)	(lb/day)	(lbs/yr)	(tons/yr)	
NOx	- - -	- - -	- - -	0.00	0.00	0.00	100
VOC	- - -	- - -	- - -	0.00	0.00	0.00	100
CO	- - -	- - -	- - -	0.00	0.00	0.00	100
SOx	- - -	- - -	- - -	0.00	0.00	0.00	100
PM10	38.84	14,176.60	7.09	38.84	14,176.60	7.09	100
PM	132.70	48,435.16	24.22	132.70	48,435.16	24.22	100
HAPs	0.058	21.11	0.011	0.06	21.11	0.01	10 / 25 *

Notes:

1. Daily PTE = (daily emissions @ proposed operating hours) * (24 hrs / proposed operating hours)
2. Annual PTE = Daily PTE * 365 days

* 10 tpy for a single HAP or 25 tpy for combined HAPs

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Best Reasonable and Demonstrated Technology (BRDT) Analysis Applicability

Pollutant	Total Point Source Emissions (tons/yr)	BRDT Threshold (tons/yr)	Exceeds BRDT Threshold?	Trigger Compound
NOx	0.00	**>75 but <100**	**No**	- - -
VOC	0.30	**>75 but <100**	**No**	- - -
CO	0.00	**>75 but <100**	**No**	- - -
SOx	0.00	**>75 but <100**	**No**	- - -
PM10	6.49	**>75 but <100**	**No**	- - -
PM	22.19	**>75 but <100**	**No**	- - -
Lead	0.0003	**>75 but <100**	**No**	- - -
Single HAP	0.004	**3**	**No**	- - -
Total HAPs	0.01	**5**	**No**	- - -
Ultra HAPs	0.00*	**300***	**No**	- - -

Notes:

* Pounds per year

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Facility HAPs Summary

HAP Name	CAS Number	TCBP Emissions[1]		Total Emissions			Ultra HAP
		lbs/day	lbs/yr	lbs/day	lbs/yr	tons/yr	
Arsenic	7440-38-2	1.05E-03	3.51E-01	**1.05E-03**	**3.51E-01**	**1.75E-04**	
Beryllium	7440-41-7	1.56E-04	5.23E-02	**1.56E-04**	**5.23E-02**	**2.62E-05**	
Cadmium	7440-43-9	1.13E-05	3.78E-03	**1.13E-05**	**3.78E-03**	**1.89E-06**	
Chromium	7440-47-3	5.47E-03	1.83E+00	**5.47E-03**	**1.83E+00**	**9.15E-04**	
Cobalt	7440-48-4			**0.00E+00**	**0.00E+00**	**0.00E+00**	
Manganese	7439-96-5	2.60E-02	8.68E+00	**2.60E-02**	**8.68E+00**	**4.34E-03**	
Mercury	7439-97-6			**0.00E+00**	**0.00E+00**	**0.00E+00**	
Nickel	7440-02-0	6.65E-03	2.22E+00	**6.65E-03**	**2.22E+00**	**1.11E-03**	
Selenium	7782-49-2	1.62E-04	5.41E-02	**1.62E-04**	**5.41E-02**	**2.70E-05**	
Lead	7439-92-1	2.06E-03	6.90E-01	**2.06E-03**	**6.90E-01**	**3.45E-04**	
Total Phosphorus	07723-14-0	1.63E-02	5.45E+00	**1.63E-02**	**5.45E+00**	**2.73E-03**	
			Total HAP	**5.78E-02**	**1.93E+01**	**9.67E-03**	

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Concrete Batching PM10 & PM Emissions

Operating Parameters

	hr/day	day/wk	wk/yr
Operating Schedule (CBP)	24	7	52

Control Equipment	Flowrate (cfm)
Truck Loading/Weigh Hopper Loading Baghouse	8,000

	Production			
	Hourly (TPH)	Daily (TPD) (1)	Annual (TPY) (1)	Annual (yd^3/yr) (2)
Truck Mix CBP	400	9,600	3,210,016	1,605,008
Facility Total	**400**	**9,600**	**3,210,016**	**1,605,008**

Concrete Composition Data - Truck Mix Plant

	Material Throughput					
	Truck Mix CBP		Total		Max. Single Plant Total	
Material	TPD (3)	ton/yr	TPD	ton/yr	TPD	ton/yr
Coarse Aggregate	4,650.47	1,555,008	4,650.47	1,555,008	4,650.47	1,555,008
Sand	3,709.92	1,240,512	3,709.92	1,240,512	3,709.92	1,240,512
Cement	940.54	314,496	940.54	314,496	940.54	314,496
Cement Supplement (Flyash)	299.06	100,000	299.06	100,000	299.06	100,000
Total Dry Mix Materials	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**
Water	0.00	0	0.00	0	0.00	0
Total Concrete	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**

PM_{10}:

Source ID	Source	Source Type (4)	Control method	EF (5)	PM_{10} Emissions (6)		
				lb/ton	lb/day	lb/yr	tpy
TCBP-1	Cement delivery to silo	Non-Fugitive	Baghouse	0.00034	0.32	106.93	0.05
TCBP-2	Cement supplement delivery to silo (flayash)	Non-Fugitive	Baghouse	0.0049	1.47	490.00	0.25
TCBP-3	Weigh hopper loading	Process	Baghouse	0.00053	4.45	1487.22	0.74
TCBP-4	Truck mix loading	Process	Baghouse	0.0263	32.60	10,901.24	5.45
				Total PM_{10}	**38.84**	**12,985.39**	**6.49**

PM:

Source ID	Source	Source Type (4)	Control method	AP-42 Emission Factor Calculations			
				EF (5)	PM Emissions (6)		
				lb/ton	lb/day	lb/yr	tpy
TCBP-1	Cement delivery to silo	Non-Fugitive	Baghouse	0.00099	0.93	311.35	0.16
TCBP-2	Cement supplement delivery to silo (flayash)	Non-Fugitive	Baghouse	0.0089	2.66	890.00	0.45
TCBP-3	Weigh hopper loading	Process	Baghouse	0.0009	7.62	2,549.51	1.27
TCBP-4	Truck mix loading	Process	Baghouse	0.0980	121.48	40,620.61	20.31
				Total PM (AP-42)	**132.70**	**44,371.47**	**22.19**

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Concrete Batching PM10 & PM Emissions

Source ID	Source	Source Type [4]	Control method	Grain Loading Requirement Calculations			
				EF [7]	Controlled PM Emissions [8]		
				gr/dscf	lb/day	lb/yr	tpy
TCBP-1	Cement delivery to silo	Non-Fugitive	Baghouse	0.02	32.91	12,013.71	6.01
TCBP-2	Cement supplement delivery to silo (flayash)	Non-Fugitive	Baghouse				
TCBP-3	Weigh hopper loading	Process	Baghouse				
TCBP-4	Truck mix loading	Process	Baghouse				
			Total PM (Grain-Loading)		**32.91**	**12,013.71**	**6.01**
			Total PM [9]		**132.70**	**44,371.47**	**22.19**

Notes:

1) Calculated daily throughput based on hourly rating and operating hours. For example, 400 tons/hour x 24 hrs/day = 9600 tons/day

2) Annual volume of concrete production based on the annual weight divided by an average density of concrete (2 tons/cubic yard).

3) Fraction of total daily production. Material Daily Thoughput (tpd) = Daily Concrete Production (tpd) x [(Annual Material Throughput) / (Annual Concrete Production)]
For example (Coarse Aggregate for Truck Mix CBP): 9600 tons/day x (1555008 tpy / 3210016 tpy) = 4650.47 tons/day

4) Process emissions include both stack emissions from the control device and emissions that are not captured by the control device. Process emissions are considered to be point source emissions for the purposes of permit emission limits.

5) Controlled Emission Factor source: AP-42 5th Ed., Final Section 11.12 updated June 2006, Table 11.12-2. Emissions are controlled by baghouse/dust collector. Table 11.12-2 does not contain a controlled emission factor for weigh hopper loading. Therefore, a controlled emission factor was calculated based on the uncontrolled emission factor and the capture and control efficiencies below:
Weigh Hopper (Baghouse) Capture Efficiency: **90.0%** Weigh Hopper (Baghouse) Control Efficiency: **90.0%**

6) Daily Emissions (lb/day) = EF (lb/ton) x Material Throughput (tons/day).
Annual Emissions (lb/yr) = EF (lb/ton) x Annual Material Throughput (ton/yr)

7) Grain loading requirement from GRIC AQMP - Part VII, Section 3.0, Subsection 3.1(C)(1).

8) Total controlled emissions are based on the grain-loading requirements and include emissions from the baghouse stack.
Daily Emissions (lb/day) = EF (gr/dscf) x Control Device Flowrate (cfm) / (7000 gr/lb) x Operating Time (hrs/day) x (60 min/hr)
Annual Emissions (lb/yr) = Daily Emissions (lb/day) x Operating Time (days/wk) x Operating Time (wk/yr).

9) Since the application was completed using AP-42 emission factors and there is a limit on the grain loading for each control device, the total PM emissions are the sum of individual emissions calculated from AP-42 controlled emission factors or from grain loading requirements in the GRIC AQMP, whichever is more. Emissions are controlled by baghouse/dust collector.

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Concrete Batching HAP Emissions

Concrete Composition Data - Truck Mix Plant

Material	TPD	ton/yr
Coarse Aggregate	4,650.47	1,555,008
Sand	3,709.92	1,240,512
Cement	940.54	314,496
Cement Supplement (Flyash)	299.06	100,000

Emission Factor Table (Source: AP-42 5th Ed., Section 11.12 Table 11.12-8)

Source:	Cement Silo Filling	Cement Supplement Silo Filling	Truck Mix Batching
Metal	(lb/ton)	(lb/ton)	(lb/ton)
Arsenic	4.24E-09	1.00E-06	6.02E-07
Beryllium	4.86E-10	9.04E-08	1.04E-07
Cadmium	N/A	1.98E-10	9.06E-09
Total Chromium	2.90E-08	1.22E-06	4.10E-06
Lead	1.09E-08	5.20E-07	1.53E-06
Manganese	1.17E-07	2.56E-07	2.08E-05
Nickel	4.18E-08	2.28E-06	4.78E-06
Total Phosphor.	N/A	3.54E-06	1.23E-05
Selenium	N/A	7.24E-08	1.13E-07

Controlled Emissions

Source:	Cement Silo Filling (1)		Cement Supplement Silo Filling (1)		Truck Mix Batching (2)		Concrete Plant Total		
Metal	(lb/day)	(lb/yr)	(lb/day)	(lb/yr)	(lb/day)	(lb/yr)	(lb/day)	(lb/yr)	(tons/yr)
Arsenic	3.99E-06	1.33E-03	2.99E-04	1.00E-01	7.46E-04	2.50E-01	1.05E-03	3.51E-01	1.75E-04
Beryllium	4.57E-07	1.53E-04	2.70E-05	9.04E-03	1.29E-04	4.31E-02	1.56E-04	5.23E-02	2.62E-05
Cadmium	N/A	N/A	5.92E-08	1.98E-05	1.12E-05	3.76E-03	1.13E-05	3.78E-03	1.89E-06
Total Chromium	2.73E-05	9.12E-03	3.65E-04	1.22E-01	5.08E-03	1.70E+00	5.47E-03	1.83E+00	9.15E-04
Lead	1.03E-05	3.43E-03	1.56E-04	5.20E-02	1.90E-03	6.34E-01	2.06E-03	6.90E-01	3.45E-04
Manganese	1.10E-04	3.68E-02	7.66E-05	2.56E-02	2.58E-02	8.62E+00	2.60E-02	8.68E+00	4.34E-03
Nickel	3.93E-05	1.31E-02	6.82E-04	2.28E-01	5.93E-03	1.98E+00	6.65E-03	2.22E+00	1.11E-03
Total Phosphorus	N/A	N/A	1.06E-03	3.54E-01	1.52E-02	5.10E+00	1.63E-02	5.45E+00	2.73E-03
Selenium	N/A	N/A	2.17E-05	7.24E-03	1.40E-04	4.68E-02	1.62E-04	5.41E-02	2.70E-05
					Total HAP Emissions =		0.06	19.34	0.0097

Table Notes:

1. Emission Factors are in lb of pollutant per ton of material loaded
2. Emission Factors are in lb of pollutant per ton of cement and cement supplement loaded

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Solvent Cleaning Emissions

Solvent Type	Petroleum Distillates	
VOC Content (1)	100%	
Density (1)	6.7	lb/gal
Annual Solvent Usage (2)	90	gallons
Disposal Quantity (2)	0	gallons

	hr/day	day/wk	wk/yr
Operating Schedule	24	7	52

Criteria Pollutant	Daily Emissions (3)	Annual Emissions (4)	
	(lbs/day)	(lbs/year)	(tons/year)
VOC	1.65	603.00	0.30

NOTES:

1. Based on MSDS for Safety-Kleen Premium Solvent (Virgin & Recycled), density range of 6.4 to 6.7 lb/gal, 100 wt% VOC.

2. Permit application states that 90 gallons are used annually and disposed. Worst cast emissions assume all of the solvent evaporates and none is disposed.

3. Daily Emissions = Annual Emissions / # of Operating Days

4. Annual Emissions = (Annual Usage - Disposal Quantity) x Density

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Concrete Batch Plant Aggregate Handling Fugitive Emission Calculations

	hr/day	day/wk	wk/yr
Operating Schedule (CBP)	24	7	52

	Production Limits		
	Hourly (TPH)	Daily (TPD)	Annual (TPY)
Truck Mix CBP	400	9,600	3,210,016

Concrete Composition Data - Truck Mix Plant

	Material Throughput					
	Truck Mix CBP		Total		Max. Single Plant Total	
Material	**TPD**	**ton/yr**	**TPD**	**ton/yr**	**TPD**	**ton/yr**
Coarse Aggregate	4,650.47	1,555,008	4,650.47	1,555,008	4,650.47	1,555,008
Sand	3,709.92	1,240,512	3,709.92	1,240,512	3,709.92	1,240,512
Cement	940.54	314,496	940.54	314,496	940.54	314,496
Cement Supplement (Flyash)	299.06	100,000	299.06	100,000	299.06	100,000
Total Dry Mix Materials	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**
Water	0.00	0	0.00	0	0.00	0
Total Concrete	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**	**9,600.00**	**3,210,016**

PM10 Emissions

Source	Emission Factor (1)	Number of Drop Points	PM10 Emissions (2)		
	lb/ton		lb/day	lbs/yr	tons/yr
Aggregate transfer	0.0033	4	61.39	20,526.11	10.26
Sand transfer	0.00099	1	3.67	1,228.11	0.61
		TOTAL:	**65.06**	**21,754.21**	**10.88**

PM Emissions

Source	Emission Factor (1)	Number of Drop Points	PM Emissions (2)		
	lb/ton		lb/day	lbs/yr	tons/yr
Aggregate transfer	0.0069	4	128.35	42,918.22	21.46
Sand transfer	0.0021	1	7.79	2,605.08	1.30
		TOTAL:	**136.14**	**45,523.30**	**22.76**

Notes:
1. Uncontrolled Emission Factor source: AP-42 5th Ed., Final Section 11.12 updated June 2006, Table 11.12-2.
2. Daily Emissions (lb/day) = EF (lb/ton) x Material Throughput (tons/day).
   Annual Emissions (lb/yr) = EF (lb/ton) x Annual Material Throughput (ton/yr)

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Paved Road Fugitive Emission Calculations

Vehicle Type	Vehicle Weight (tons)	VMT per day	VMT per year
Concrete Trucks	35.00	347.67	126,900

$$E = k(sL)^{0.91} \times (W)^{1.02}$$

Source of Equation: See Table Notes (2)

Equation Parameter	PM10	PM
E, annual size-specific uncontrolled emission factor for paved industrial roads (lb/VMT) (2)	**0.79**	**3.97**
k, Particle size multiplier for particle size range (lb/VMT) (Source: AP-42 Table 13.2.1-1)	**0.0022**	**0.011**
sL, road surface silt loading, (g/m^2) (Source: AP-42 Chapter 13.2.1-3)	**12**	**12**
W, mean weight (tons) of the vehicles traveling the road	**35.00**	**35.00**

PM10 Emissions

Pollutant	PM10 Emissions (2)		
	lb/day	lbs/yr	tons/yr
Concrete Trucks	275.80	100,667.35	50.33
Total	**275.80**	**100,667.35**	**50.33**

PM Emissions

Pollutant	PM Emissions (2)		
	lb/day	lbs/yr	tons/yr
Equation Parameter	1379.00	503,336.76	251.67
Total	**1,379.00**	**503,336.76**	**251.67**

Table Notes:

1. Emission Factor Source: AP-42 5th Ed., Section 13.2.1.3 Equation 1, Paved Roads, Rev.: January 2011
2. Emissions (lbs/yr) = Emission factor (lb/VMT) x (VMT/year)

   Example Calculations For : PM10 emissions (in lbs per year) from Concrete Trucks

   Based on Equation listed in Table Note (2),

   Emission Factor for PM10 (Concrete Trucks) = [0.0022 x (12)^0.91 x (35)^1.02] = 0.79 lb/VMT

   Therefore, Annual Emissions of PM10 from Concrete Trucks = 0.79 (lb/VMT) x 126900 (VMT/yr) = 100667.35 lbs/yr

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Unpaved Road Fugitive Emission Calculations

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Vehicle Type	Vehicle Weight (tons)	VMT per day	VMT per year	Control Efficiency
Loaders	20.00	410.30	149,760	70%

$$E = \left[k \left(\frac{s}{12} \right)^{a} \times \left(\frac{W}{3} \right)^{b} \right]$$

Source of Equation: See Table Notes (2)

Equation Parameter	PM10	PM
E, annual size-specific uncontrolled emission factor for upaved industrial roads (lb/VMT) (2)	**1.54**	**6.06**
k, Particle size multiplier for particle size range, (lb/VMT) (Source: AP-42 Table 13.2.2-2)	**1.5**	**4.9**
s, surface material silt content, (%) (Source: AP-42 Chapter 13.2.2)	**4.8**	**4.8**
W, mean weight (tons) of the vehicles traveling the road	**20.00**	**20.00**
a, constant for industrial roads (Source: AP-42 Table 13.2.2-2)	**0.9**	**0.7**
b, constant for industrial roads (Source: AP-42 Table 13.2.2-2)	**0.45**	**0.45**

PM10 Emissions

Pollutant	Assumed Control Efficiency(3)	Uncontrolled PM10 Emissions			Controlled PM10 Emissions (3)		
		lb/day	lbs/yr	tons/yr	lb/day	lbs/yr	tons/yr
PM10 Emissions	**70%**	633.59	231,259.73	115.63	190.08	69,377.92	34.69
Total		**633.59**	**231,259.73**	**115.63**	**190.08**	**69,377.92**	**34.69**

PM Emissions

Pollutant	Assumed Control Efficiency(3)	Uncontrolled PM Emissions			Controlled PM Emissions (3)		
		lb/day	lbs/yr	tons/yr	lb/day	lbs/yr	tons/yr
PM Emissions	**70%**	2,485.99	907,387.60	453.69	745.80	272,216.28	136.11
Total		**2,485.99**	**907,387.60**	**453.69**	**745.80**	**272,216.28**	**136.11**

Table Notes:

1. Emission Factor Source: AP-42 5th Ed., Section 13.2.2, Equations 1a and 2, Unpaved Roads, Rev.: November 2006
2. Emissions (lbs/yr) = Emission factor (lb/VMT) x (VMT/year)

Example Calculations For : Uncontrolled PM10 emissions (in lbs per year) from PM10 Emissions

Based on Equation listed in Table Note (2),

Emission Factor for PM10 (Loaders) = [1.5 x (4.8/12)^0.9 x (20/3)^0.45] = 1.54 lb/VMT

3. Typical control efficiency used for GRIC permitting. In accordance with Western Regional Air Partnership's *WRAP Fugitive Dust Handbook* , dated Sept 7, 2006. The published PM10 control efficiency for watering unpaved roads is shown as 10-74% and as shown in AP-42 Figure 13.2.2-2.

Therefore, Annual Uncontrolled Emissions of PM10 from Loaders = 1.54 (lb/VMT) x 149760 (VMT/yr) = 231,259.73 lbs/yr

3. Controlled Emissions (lbs/yr) = Uncontrolled Emissions (lbs/yr) x (1 - Control Efficiency) = 231259.73 lbs/yr x (1 - 0.7) = 69377.92 lbs/yr

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Storage Pile Fugitive Emission Calculations

Source	PM_{10} EF[1] lb/acre-yr	Control Method	Control Efficiency[2]	Pile Size acres	PM_{10} Emissions lb/day	lbs/yr	tons/yr
Aggregate Material Stockpiles	630	Wet Supression	70%	1.0	0.52	189.00	0.09

Notes:

1. Emission Factor Source: Maricopa County Air Quality Department, *Emissions Inventory Help Sheet for Sand & Gravel Plants* , 2008