



Alabama Department of Environmental Management
adem.alabama.gov

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Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

JULY 23, 2024

MR. PAUL LOJEK
VICE-PRESIDENT OF OPERATIONS
FERROGLOBE USA METALLURGICAL INC
P.O. BOX 157
BEVERLY, OH 45715

**RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0025216**

Dear Mr. Lojek:

Transmitted herein is a draft of the referenced permit.

We would appreciate your comments on the permit within **30 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

By copy of this letter and the draft permit, we are also requesting comments within the same time frame from EPA.

Our records indicate that you have utilized the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). The Department transitioned from the E2 Reporting System to the Alabama Environmental Permitting and Compliance System (AEPACS) for the submittal of DMRs on November 15, 2021. AEPACS is an electronic system that allows facilities to apply for and maintain permits as well as submit other required applications, registrations, and certifications. In addition, the system allows facilities to submit required compliance reports or other information to the Department. The Department has used the E2 User account information to set up a similar User Profile in AEPACS based on the following criteria:


1. The user has logged in to E2 since October 1, 2019; and
2. The E2 user account is set up using a unique email address.

E2 users that met the above criteria will only need to establish an ADEM Web Portal account (<https://prd.adem.alabama.gov/awp>) under the same email address as their E2 account to have the same permissions in AEPACS as they did in E2. They will also automatically be linked to the same facilities they were in E2.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

If you have questions regarding this permit or monitoring requirements, please contact Clint Dear by e-mail at clint.dear@adem.alabama.gov or by phone at (334) 271-7851.

Sincerely,


Scott Jackson, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Enclosure: Draft Permit

pc via website: Montgomery Field Office
EPA Region IV
U.S. Fish & Wildlife Service
AL Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources





NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: FERROGLOBE USA METALLURGICAL, INC.

FACILITY LOCATION: FERROGLOBE USA METALLURGICAL, INC.
2401 OLD MONTGOMERY HWY
SELMA, ALABAMA 36703
DALLAS COUNTY

PERMIT NUMBER: AL0025216

RECEIVING WATERS: 001 - TARVER CREEK
002 - ALABAMA RIVER
003 - ALABAMA RIVER

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE: OCTOBER 30, 2020

EFFECTIVE DATE: NOVEMBER 1, 2020

MODIFICATION ISSUANCE DATE:

MODIFICATION EFFECTIVE DATE:

EXPIRATION DATE: OCTOBER 31, 2025

DRAFT

Alabama Department of Environmental Management

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

DSN 001Q: Storm water runoff associated with silicon metal production.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
				(Report) Minimum Daily		(Report) Maximum Daily				
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Quarterly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Quarterly	Grab	All Months
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Quarterly	Grab	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.
- 4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.
- 5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

DSN 002Q: Storm water runoff associated with silicon metal production activities.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
				(Report) Minimum Daily		(Report) Maximum Daily				
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Quarterly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Quarterly	Grab	All Months
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Quarterly	Estimate	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.
- 4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.
- 5/ For the purpose of demonstration of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

DSN 0031: Non-contact cooling water associated with silicon metal production

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency ²	Sample Type ¹	Seasonal
Temperature, Water Deg. Fahrenheit (00011) Effluent Gross Value	*****	*****	*****	*****	*****	90 Maximum Daily	deg F	Monthly	Grab	All Months
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Monthly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Grab	All Months
Chlorine, Total Residual (50060) Effluent Gross Value	*****	*****	*****	*****	1.0 Monthly Average	1.0 Maximum Daily	mg/l	2/Monthly	Grab	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

- 1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.
- 2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.
- 3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.
- 4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.
- 5/ A measurement of Total Residual Chlorine below 0.050 mg/L shall be considered in compliance with the permit limitations above and should be reported as *B on the discharge monitoring reports.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.
- b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The facility name and location, point source number, date, time and exact place of sampling;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used, including source of method and method number; and
- f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the

permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

- a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e., (March, June, September and December DMR's).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR for the month of the semiannual period, i.e. (June and December DMR's).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

- b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **monthly** basis. The first report is due on the **28th day of (MONTH, YEAR)**. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF QUARTERLY TESTING shall be submitted on a **quarterly** basis. The first report is due on the **28th day of [Month, Year]**. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

- c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b electronically.

- (1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's electronic system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b, unless otherwise directed by the Department.

If the Department's electronic system is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within 5 calendar days of the Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic DMR submittal verifying the original submittal date (date of the fax, copy of the dated e-mail, or hand-delivery stamped date), if applicable.

- (2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.

Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

- (3) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.
- (4) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.
- (5) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

- d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

**Alabama Department of Environmental Management
Water Division
Office of Water Services
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

**Alabama Department of Environmental Management
Water Division
Office of Water Services
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400**

- f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

**Alabama Department of Environmental Management
Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

**Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400**

- g. If this permit is a re-issuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

- (1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";
- (2) threatens human health or welfare, fish or aquatic life, or water quality standards;
- (3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);
- (4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and
- (6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

- b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (<http://udem.alabama.gov/DeptForms/Form421.pdf>) and include the following information:
- (1) A description of the discharge and cause of noncompliance;

- (2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

- a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.
- b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

- a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:
 - (1) name and general composition of biocide or chemical;
 - (2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;
 - (3) quantities to be used;
 - (4) frequencies of use;
 - (5) proposed discharge concentrations; and
 - (6) EPA registration number, if applicable.
- b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the

application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based on Estimated Characteristics

- a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.
- b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. **For Outfall DSN003 only, the Permittee shall complete and submit an EPA NPDES Application Form 2E (EPA Form 3510-2E) no later than 6 mons (180 days) after the date that Non-contact cooling waters from Outfall DSN003 commence.**
3. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II: OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

- a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
- b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:

- (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
 - (2) It enters the same receiving stream as the permitted outfall; and
 - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
 - (3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
 - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
- b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

- a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.
- b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.
- c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
- d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.
- e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

- a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.
- b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

- a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.
- b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

- a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.
- b. The permittee shall notify the Director as soon as it is known or there is reason to believe:
 - (1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (i) one hundred micrograms per liter;
 - (ii) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;
 - (iii) five times the maximum concentration value reported for that pollutant in the permit application; or
 - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

- (i) five hundred micrograms per liter;
- (ii) one milligram per liter for antimony;
- (iii) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

- a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
 - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
 - (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
 - (3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.
- b. This permit may be modified during its term for cause, including but not limited to, the following:
 - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;
 - (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
 - (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
 - (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
 - (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
 - (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
 - (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
 - (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
 - (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
 - (10) When required by the reopener conditions in this permit;
 - (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

- (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
- (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or
- (14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;
- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. DISCHARGE OF WASTEWATER GENERATED BY OTHERS

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III: OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

- a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.
- b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.
 - (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;
 - (2) An action for damages;
 - (3) An action for injunctive relief; or
 - (4) An action for penalties.
- c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:
 - (1) initiate enforcement action based upon the permit which has been continued;
 - (2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
 - (3) reissue the new permit with appropriate conditions; or
 - (4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.
2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.
3. Construction has begun when the owner or operator has:
 - a. begun, or caused to begin as part of a continuous on-site construction program:
 - (1) any placement, assembly, or installation of facilities or equipment; or
 - (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.
2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.
3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.
4. AWPCA - means the Alabama Water Pollution Control Act.
5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.
6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.
7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
9. Daily maximum - means the highest value of any individual sample result obtained during a day.
10. Daily minimum - means the lowest value of any individual sample result obtained during a day.
11. Day - means any consecutive 24-hour period.
12. Department - means the Alabama Department of Environmental Management.
13. Director - means the Director of the Department.
14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).
15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.
16. DO – means dissolved oxygen.
17. 8HC – means 8-hour composite sample, including any of the following:
 - a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
 - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
18. EPA - means the United States Environmental Protection Agency.
19. FC – means the pollutant parameter fecal coliform.
20. Flow – means the total volume of discharge in a 24-hour period.
21. FWPCA - means the Federal Water Pollution Control Act.
22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).
23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category “Division D – Manufacturing” and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
26. MGD – means million gallons per day.

27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.
28. New Discharger – means a person, owning or operating any building, structure, facility or installation:
 - a. from which there is or may be a discharge of pollutants;
 - b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and
 - c. which has never received a final effective NPDES permit for dischargers at that site.
29. NH₃-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".
34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".
36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.
39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.
40. TON – means the pollutant parameter Total Organic Nitrogen.
41. TRC – means Total Residual Chlorine.
42. TSS – means the pollutant parameter Total Suspended Solids.
43. 24HC – means 24-hour composite sample, including any of the following:
 - a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
 - c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS**A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS****1. BMP Plan**

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

- a. Establish specific objectives for the control of pollutants:
 - (1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;
- c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;
- d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;
- e. Prevent or minimize stormwater contact with material stored on site;
- f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;
- g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;
- h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;
- i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;
- j. Provide for the disposal of all used oils, hydraulic fluids, firefighting foams, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;
- k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;
- l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;
- m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the

substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

- n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;
- o. Be reviewed by plant engineering staff and the plant manager; and
- p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

- a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.
- b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.
- c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

- a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.
- b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.
- c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.
- d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

- a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.
- b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.
- c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. Stormwater Sampling

- a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.
- b. All test procedures will be in accordance with part I.B. of this permit.

C. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

The entity providing water to the permittee is a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent, which would otherwise be discharged; therefore, the permittee is exempt from this permit condition.

ADEM PERMIT RATIONALE

PREPARED DATE: May 28, 2024

PREPARED BY: Clint Dear

Permittee Name: Ferroglobe USA Metallurgical, Inc.

Facility Name: Ferroglobe USA Metallurgical, Inc.

Permit Number: AL0025216

PERMIT IS A MAJOR MODIFICATION

DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

DSN	Description
001	Stormwater runoff associated with silicon metal production activities.
002	Stormwater runoff associated with silicon metal production activities.
003	Non-contact cooling water associated with silicon metal production activities.

INDUSTRIAL CATEGORY: NON-CATEGORICAL

MAJOR: No

STREAM INFORMATION:

Outfall	DSN001	DSN002	DSN003
GPS Coordinates	32.37445 -86.98691	32.37898 -86.99037	32.37699 -86.986608
Receiving Stream:	Tarver Creek	Alabama River	Alabama River
Classification:	Fish and Wildlife	Fish and Wildlife	Fish and Wildlife
River Basin:	Alabama	Alabama	Alabama
7Q10:	0 cfs	5219 cfs	5219 cfs
1Q10:	0 cfs	3915 cfs	3915 cfs
Annual Average Flow:	0.02 cfs	7397 cfs	7397 cfs
303(d) List:	No	No	No
Impairment:	----	----	----
TMDL:	No	No	No

DISCUSSION:

Ferroglobe USA Metallurgical, Inc. produces silicon metal by utilizing submerged arc furnaces. This modification covers the addition of Outfall 003 with discharges going to the Alabama River. The non-contact cooling water will be moved from Outfall 001 to Outfall 003. This change will make Outfall 001 stormwater only. This modification also covers a name change from Globe Metallurgical, Inc. to Ferroglobe USA Metallurgical, Inc.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is for a new or expanded discharge. Therefore, the applicant is required to demonstrate that the discharge is necessary for economic and social development, and the anti-degradation rationale is attached.

EPA has not promulgated specific guidelines for the discharges covered under the proposed permit. Proposed permit limits are based on Best Professional Judgment. The proposed frequencies are based on a review of site specific conditions and an evaluation of similar facilities.

DSN 001Q: Storm water runoff associated with silicon metal production.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
				(Report) Minimum Daily		(Report) Maximum Daily					
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Quarterly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15.0 Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Quarterly	Grab	All Months	BPJ

DSN 002Q: Storm water runoff associated with silicon metal production activities.

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
				(Report) Minimum Daily		(Report) Maximum Daily					
pH (00400) Effluent Gross Value	****	****	****	(Report) Minimum Daily	****	(Report) Maximum Daily	S.U.	Quarterly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	****	****	****	****	****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	****	****	****	****	****	15.0 Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Zinc Total Recoverable (01094) Effluent Gross Value	****	****	****	****	****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Copper Total Recoverable (01119) Effluent Gross Value	****	****	****	****	****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	****	(Report) Maximum Daily	MGD	****	****	****	****	Quarterly	Estimate	All Months	BPJ

DSN 0031: Non-contact cooling water associated with silicon metal production

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
Temperature, Water Deg. Fahrenheit (00011) Effluent Gross Value	*****	*****	*****	*****	*****	90 Maximum Daily	deg F	Monthly	Grab	All Months	WQBEL
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Monthly	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Grab	All Months	BPJ
Chlorine, Total Residual (50060) Effluent Gross Value	*****	*****	*****	*****	1.0 Monthly Average	1.0 Maximum Daily	mg/l	2/Monthly	Grab	All Months	WQBEL

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations
- 303(d) – 303(d) List of Impaired Waters
- TMDL – Total Maximum Daily Load Requirements

Discussion

DSN001: Storm water runoff associated with silicon metal production.

Best Professional Judgment (BPJ)

The parameters of concern for DSN001 are based on the parameters of concern listed in EPA form 2F and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility. The parameters with specific limits are discussed below:

Oil & Grease

The daily maximum limit for Oil and Grease should prevent the occurrence of a visible sheen in the stream and has been shown to be achievable through the use of proper BMPs.

Metals

The previous permit version imposed daily maximum and monthly average limitations for Copper and Zinc. Due to the non-contact cooling water being moved from Outfall 001 to Outfall 003, Outfall 001 no longer has a reasonable potential to discharge this pollutant at a level that will contribute to excursions of the in-stream WQS. As a result, the daily maximum and monthly average limitation for Total Recoverable Copper and Total Recoverable Zinc, which discharge to attainment waters, are no longer required. Quarterly monitoring and reporting for Total Recoverable Copper and Total Recoverable Zinc is imposed on Outfall 001 due to the silicon metal production activities. The monitoring is required so that sufficient information will be available regarding the contribution from this point source and to develop future permit limitations, if necessary.

DSN003: Non-contact cooling water associated with silicon metal production

Water Quality Based Effluent Limits (WOBELS)

Temperature

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)3(i) – Specific Water Quality for Water Fish and Wildlife classified streams states: “The maximum temperature in streams, lakes, and reservoirs, other than those in river basins listed in subparagraph (ii) hereof, shall not exceed 90°F.” Based on BPJ, this limit is reasonable and should be achievable of the noncontact cooling water leaving the site through the permitted outfall.

pH

ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)2 – Specific Water Quality for Fish and Wildlife classified streams states: “Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units.” Based on BPJ of the dilution afforded from the receiving stream, the limits for pH are proposed at 6.0 to 8.5 s.u.

Numeric Reasonable potential Analysis (RPA):

A numeric RPA was performed using analytical data submitted by the facility on EPA Form 2C for Outfall DSN001. The RPA indicates whether or not pollutants in treated effluent have the potential to contribute to excursions of Alabama’s in-stream Water Quality Standards. No parameters included in the analysis showed a reasonable potential to violate water quality standards; therefore, no additional limitations are proposed to be included in this permit issuance.

Total Residual Chlorine

The TRC monthly average and daily maximum limitation is based on the maximum concentration allowed in the DSN003 discharge such that after mixing with the 7Q10/1Q10 of the receiving stream the resulting concentration would not exceed the EPA recommended maximum instream concentration for a monthly average of 0.011 mg/l and a daily maximum of 0.019 mg/l, and in no cases would exceed 1.0 mg/l. This calculation utilizes an updated 1Q10 of 3915 cfs and 7Q10 of 5219 cfs provided by the ADEM Water Quality Branch and the average DSN003 flow based on information reported in the EPA Form 2E.

Receiving Stream 1Q10: 3915 cfs = 2530.33 MGD

Average DSN002 Flow: 0.053 MGD

Daily Max TRC Limit = $\frac{(\text{Stream 1Q10} + \text{Average Industrial Flow}) * \text{Chronic WQ Criterion}}{\text{Average Industrial Flow}}$

Daily Max TRC Limit = $\frac{(2530.33 + 0.053) * 0.019 \text{ mg/l}}{0.053}$

Daily Max TRC Limit = 907.11 mg/l = 1.0 mg/l

Receiving Stream 7Q10: 5219 cfs = 3373.13 MGD

Average DSN002 Flow: 0.053 MGD

Monthly Avg TRC Limit = $\frac{(\text{Stream 7Q10} + \text{Average Industrial Flow}) * \text{Chronic WQ Criterion}}{\text{Average Industrial Flow}}$

Monthly Avg TRC Limit = $\frac{(3373.13 + 0.053) * 0.011 \text{ mg/l}}{0.053}$

Monthly Avg TRC Limit = 700.09 mg/l = 1.0 mg/l

Based on the calculations shown, the facility needs to maintain a TRC monthly average and daily maximum concentration of 1.0 mg/l.

Cooling Water Intake Structure

The entity providing water to the permittee is a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent, which would otherwise be discharged; therefore, the permittee is exempt from this permit condition. This information will be noted in Part IV of the permit.

Best Management Practices (BMP)

Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. This facility is required to maintain a BMP plan. The requirements of the BMP plan call for minimization of stormwater contact with waste materials, products and by-products, and for prevention of spills or loss of fluids from equipment maintenance activities. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$							Enter Max Daily Discharge as reported by Applicant (C _d) Max	Enter Avg Daily Discharge as reported by Applicant (C _d) Ave	Partition Coefficient (Stream / Lake)
ID	Pollutant	Carcinogen ^{yes}	Type	Background from upstream source (C _{d2}) Daily Max	Background from upstream source (C _{d2}) Monthly Ave	Background Instream (C _s) Daily Max	Background Instream (C _s) Monthly Ave		
				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1	Antimony		Metals	0	0	0	0	0	-
2	Arsenic**	YES	Metals	0	0	0	0	0	0.574
3	Beryllium**		Metals	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0.235
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	-
7	Copper**		Metals	0	0	0	0	0.69	0.071
8	Lead**		Metals	0	0	0	0	0	0.388
9	Mercury**		Metals	0	0	0	0	0	0.202
10	Nickel**		Metals	0	0	0	0	0	0.302
11	Selenium		Metals	0	0	0	0	0	0.505
12	Silver		Metals	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	-
14	Zinc**		Metals	0	0	0	0	2.42	0.225369
15	Cyanide		Metals	0	0	0	0	0	0.330
16	Total Phenolic Compounds		Metals	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	-
18	Acrilan		VOC	0	0	0	0	0	-
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	-
20	Alkyls	YES	VOC	0	0	0	0	0	-
21	Benzene*	YES	VOC	0	0	0	0	0	-
22	Bromoform*	YES	VOC	0	0	0	0	0	-
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	-
24	Chlordane	YES	VOC	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	-
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	-
29	Chloroform*	YES	VOC	0	0	0	0	0	-
30	4,4'-DDD	YES	VOC	0	0	0	0	0	-
31	4,4'-DDE	YES	VOC	0	0	0	0	0	-
32	4,4'-DDT	YES	VOC	0	0	0	0	0	-
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	-
34	1,1-Dichloroethane		VOC	0	0	0	0	0	-
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	-
36	Trans-1,2-Dichloro-Ethylene		VOC	0	0	0	0	0	-
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	0	-
38	1,2-Dichloropropane		VOC	0	0	0	0	0	-
39	1,3-Dichloro-Propylene		VOC	0	0	0	0	0	-
40	Dieldrin	YES	VOC	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	-
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	-
45	1,1,2,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	-
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	-
48	Toxaphene	YES	VOC	0	0	0	0	0	-
49	Tributyltin (TBT)	YES	VOC	0	0	0	0	0	-
50	1,1,1-Trichloroethane		VOC	0	0	0	0	0	-
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	-
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	-
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	-
54	p-Chloro-m-Cresol		Acids	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	-
56	2,4-Dichlorophenol		Acids	0	0	0	0	0	-
57	2,4-Dimethylphenol		Acids	0	0	0	0	0	-
58	4,6-Dinitro-o-Cresol		Acids	0	0	0	0	0	-
59	2,4-Dinitrophenol		Acids	0	0	0	0	0	-
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	0	-
61	Dioxin (2,3,7,8-TCDD)	YES	Acids	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	-
64	Para-chlorophenol*	YES	Acids	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	-
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	-
67	Acenaphthene		Bases	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	-
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	-
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	-
73	3,4-Benzo-Fluoranthene		Bases	0	0	0	0	0	-
74	Benzo(GH)Perylene		Bases	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	-
77	Bis (2-Chloroethyl)-Ether*	YES	Bases	0	0	0	0	0	-
78	Bis (2-Chloroisopropyl) Ether		Bases	0	0	0	0	0	-
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	-
84	Chrysene*	YES	Bases	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	-
87	Dibenzo(A,H)Anthracene*	YES	Bases	0	0	0	0	0	-
88	1,2-Dichlorobenzene		Bases	0	0	0	0	0	-
89	1,3-Dichlorobenzene		Bases	0	0	0	0	0	-
90	1,4-Dichlorobenzene		Bases	0	0	0	0	0	-
91	3,3-Dichlorobenzidine*	YES	Bases	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	-
94	2,4-Dinitrobenzene*	YES	Bases	0	0	0	0	0	-
95	2,6-Dinitrotoluene		Bases	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	-
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	-
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	-
99	Endosulfan sulfate	YES	Bases	0	0	0	0	0	-
100	Enflurane	YES	Bases	0	0	0	0	0	-
101	Enflurane Aldehyde	YES	Bases	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	-
104	Heptachlor	YES	Bases	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	-
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	-
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	-
108	Hexachlorocyclohexane (alpha)	YES	Bases	0	0	0	0	0	-
109	Hexachlorocyclohexane (beta)	YES	Bases	0	0	0	0	0	-
110	Hexachlorocyclohexane (gamma)	YES	Bases	0	0	0	0	0	-
111	Hexachlorocyclopentadiene		Bases	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	-
113	Indeno(1,2,3-CK)Pyrene*	YES	Bases	0	0	0	0	0	-
114	Isoflorone		Bases	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	-
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	0	-
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	0	-
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	0	-
120	PCB-1016	YES	Bases	0	0	0	0	0	-
121	PCB-1221	YES	Bases	0	0	0	0	0	-
122	PCB-1232	YES	Bases	0	0	0	0	0	-
123	PCB-1242	YES	Bases	0	0	0	0	0	-
124	PCB-1248	YES	Bases	0	0	0	0	0	-
125	PCB-1254	YES	Bases	0	0	0	0	0	-
126	PCB-1260	YES	Bases	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	-
129	1,2,4-Trichlorobenzene		Bases	0	0	0	0	0	-

0.053	Enter Q _d = wastewater discharge flow from facility (MGD)
0.08200314	Q _d = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter flow from upstream discharge Q _{d2} = background stream flow in MGD above point of discharge
0	Q _{d2} = background stream flow from upstream source (cfs)
5219	Enter TQ10, Q _s = background stream flow in cfs above point of discharge
3915	Enter or estimated, TQ10, Q _s = background stream flow in cfs above point of discharge (TQ10 estimated at 75% of TQ10)
7397	Enter Mean Annual Flow, Q _s = background stream flow in cfs above point of discharge
7487	Enter TQ2, Q _s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter 0	Enter C _s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Enter 0	Q _d + Q _{d2} + C _s = resultant in-stream flow, after discharge
Calculated on other	C _s = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100.00	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 n.s.l.	Enter, Background pH above point of discharge
yes	Enter, is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

July 11, 2024

ANTIDegradation Rationale

Permit Number: AL0025216
Facility Name: Ferroglobe USA Metallurgical, Inc.
Receiving water: Tarver Creek and Alabama River
Stream Category: Tier 2 as defined by ADEM Admin. Code 335-6-10-.12
Discharge Description: Non-contact cooling and stormwater runoff associated with silicon metal production activities.

The following preliminary determination was prepared in accordance with ADEM Admin. Code 335-6-10-.12 (7) (c):

The Department has reviewed the information submitted by applicant in accordance with ADEM Admin. Code 335-6-10-.12 (9). The applicant has demonstrated that there are no alternative options which are economically feasible or technically viable. In the case of technically viable options, the applicant has shown them to be cost prohibitive through the alternatives analysis required by the permit application.

The permit applicant has indicated that the following economic and/or social benefits will result from the issuance of this permit:

- The existing facility employs 100 employees. The relocation of the proposed discharge will allow the current facility to continue operations and maintain the employment of the 100 employees.
- When in full operation, the facility will pay approximately \$300,000 in state and local taxes annually.

The Department has determined that the discharge as proposed by the permit applicant is necessary for important economic and social development in the area in which the receiving water is located.

Reviewed By:



Date: 7/23/24

NPDES Individual Permit Mod/Reissue (Form 187) - Supplementary Information for Industrial Facilities

version 2.8

(Submission #: HPX-KN0R-F6PV9, version 3)

Digitally signed by:
AEPACS
Date: 2024.05.06 09:42:50 -05:00
Reason: Submission Data
Location: State of Alabama

Details

Submission ID HPX-KN0R-F6PV9

Form Input

General Instructions

This form should be used to submit the following permit requests for permitted Industrial Individual NPDES facilities

- Permit Transfers
- Permittee/Facility Name Changes
- Minor Modifications, for example:
 - > Frequency of monitoring or reporting modifications
 - > Changes to interim compliance dates in a schedule of compliance, not including the final compliance date.
 - > Removal of a point source outfall, provided the discharge is terminated and does not result in discharge of pollutants from other outfalls, except in accordance with permit limits.
- Major Modifications, (Any modifications not covered by minor modifications, whether Effluent Limit changes occur or not)
- Reissuances
 - Reissuance of a permit due to approaching expiration
 - Revocation and Reissuance of permit prior to its scheduled expiration

Applicable Base Fees:

- Permit Transfers and/or Permittee/Facility Name Changes
 - > \$800
- Minor Modifications (see examples above)
 - > \$3,940 (Major Sources)
 - > \$3,120 (Minor Sources)
- Major Modifications
 - > \$17,990 (Major Sources)
 - > \$5,615 (Minor Sources)
- Reissuances
 - > \$17,990 (Major Sources)
 - > \$5,615 (Minor Sources)

[For assistance, please click here to determine the permit staff responsible for the site or call \(334\) 271-7943](#)

Processing Information

Purpose of Application

Major Modification (Effluent Limit Change)

Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:

Permittee or Facility Name Change

Action Type

Major Modification with NOC

Brief description of the action/change that has resulted in the request for this permit modification:

Relocation of cooling water blowdown discharge location to new outfall.
Change facility name.

General Information

SID Permit Number (if your facility currently holds an SID permit, please provide that number below):

NONE PROVIDED

NPDES or General Permit Numbers (if applicable, please list all permit numbers):

AL0025216

Is this facility/site only applying for permit coverage for discharges from stormwater?

No

Is a new stormwater outfall being added?

No

Permit Information

Permit Number

AL0025216

Current Permittee Name

Globe Metallurgical Inc

Permittee

Permittee Name

Ferroglobe USA Metallurgical, Inc.

Mailing Address

2401 Old Montgomery Highway
Selma, AL 36703

Per ADEM Admin. Code r. 335-6-6-.09 (1), a Responsible Official is defined as CEO, President, any position at a level of Vice President or higher, Owner, Partner, Managing Member (LLC), or ranking elected official. Please provide the contact information for the person meeting this definition.

Do NOT enter information for a person that is/will be a Duly Authorized Representative (DAR) (i.e. a person that has been delegated signatory permissions by a Responsible Official). A person that is a Duly Authorized Representative is NOT considered a RESPONSIBLE OFFICIAL.

Responsible Official

Prefix

Mr.

First Name Last Name

Paul Lojek

Title

Vice-President of Operations

Organization Name

Ferroglobe USA Metallurgical, Inc.

Phone Type Number Extension

Business 7409848608

Email

plojek@ferroglobe.com

Mailing Address

P.O. Box 157

Beverly, OH 45715

Does the Responsible Official intend to delegate signatory authority for DMRs or other compliance reports to an individual as a duly authorized representative (DAR) for this site?

Yes

Pursuant to ADEM Admin. Code r. 335-6-6-.09(2), a person may ONLY be delegated signatory authority for reports if that person has responsibility for the overall operation of the regulated facility or regulated activity. Once such delegation is made, that person is considered a duly authorized representative (DAR).

Existing Permit Contacts

Affiliation Type	Contact Information	Remove?
Permittee	Globe Metallurgical Inc	NONE PROVIDED
DMR Contact	Jason Smith, Globe Metallurgical Inc	Remove
Notification Recipient,Responsible Official	Matt Greene, Globe Metallurgical Inc	Keep
Consultant	Randy McGough, McGough Engineering	Keep

Duly Authorized Representative (DAR)

Duly Authorized Representative - Delegation of Signatory Authority by Responsible Official

If the permittee has not already prepared a signed and dated delegation form/letter, an optional form can be downloaded from the link below. All information should be completed along with the responsible official's signature and date signed. That signed form can be uploaded in the attachment section below titled "DAR Documentation".

[Optional Delegation of Signatory Authority Form](#)

Delegation Document for Duly Authorized Representation (DAR)

[GMI DAR Letter Jason Kearns.pdf - 09/18/2023 11:02 AM](#)

Comment

NONE PROVIDED

Pursuant to ADEM Admin. Code r. 335-6-6-.09(2), a person may ONLY be delegated signatory authority for reports if that person has responsibility for the overall operation of the regulated facility or activity. Once such delegation is made, that person is considered a duly authorized representative (DAR).

Authorized Rep

Prefix

Mr.

First Name Last Name

Jason Kearns

Title

Plant Manager

Organization Name

Ferroglobe USA Metallurgical, Inc.

Phone Type Number Extension

Business 3348742017

Email

jkearns@ferroglobe.com

Mailing Address

2401 Old Montgomery Hwy

Selma, AL 36703

United States

Facility/Site Information

Facility/Site Name

Globe Metallurgical Inc -Selma Operations

Does the Facility/Site Name need to be updated?

Yes

Updated Facility/Site Name

Ferroglobe USA Metallurgical, Inc.

Organization/Ownership Type

Corporation

Facility/Site Address or Location Description

2401 Old Montgomery Hwy

Selma, AL 36703

Facility/Site County

Dallas

Detailed Directions to the Facility/Site

From Highway 80 south of Selma, proceed southeast on Old Montgomery Hwy approximately 0.7 miles to site entrance gate.

Facility Map

[GMI Site Location USGS Topo Map 2024.pdf - 03/14/2024 05:10 PM](#)

Comment

NONE PROVIDED

Please refer to the link below for Lat/Long map instruction help:

[Map Instruction Help](#)

Facility/Site Front Gate Latitude and Longitude

32.37300597371806,-86.9938808204573

2401 Old Montgomery Hwy, Selma, AL

SIC Code(s) [Please enter Primary SIC Code first followed by any additional applicable SIC Codes]

3313-Electrometallurgical Products Except Steel

NAICS Code(s) [Please enter Primary NAICS Code first followed by any additional applicable NAICS Codes]

331110-Iron and Steel Mills and Ferroalloy Manufacturing

Facility/Site Contact

Prefix

Mr.

First Name Last Name

Jason Keams

Title

Plant Manager

Organization Name

Ferroglobe USA Metallurgical, Inc.

Phone Type Number Extension

Business 3348742017

Email

jkeams@ferroglobe.com

Address

2401 Old Montgomery Hwy
Selma, AL 36703

DMR Contact(s) (1 of 1)

DMR Contact

Prefix

Mr.

First Name Last Name

Matt Greene

Title

Corporate Manager

Phone Type Number Extension

Business 7409848608

Email

mgreene@ferroglobe.com

Address

2401 Old Montgomery Highway
Selma, AL 36703

Business Activity

A facility with processes inclusive in the business areas shown below may be covered by Environmental Protection Agency's (EPA) categorical effluent guideline standards. These facilities are termed categorical users. If unsure, please call the Industrial Section at (334) 271-7943 to discuss or use the link below to contact the Permit Engineer for the county the facility is/will be located in.

[Industrial Section Assignment Map](#)

If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous wastes), please check the category of business activity:

Ferroalloy Manufacturing

Give a brief description of all operations at this facility including primary products or services:

Silicon Metal Production

Ferroalloy Production (Approved in 2018 but no production)

Water Supply

Water Sources (check all that apply):

Private Well

Well ID	Private Well in Million Gallons per Day (MGD)
1	0.200
	Sum: 0.2

Outfalls (1 of 2)

001

Please click below if this discharge no longer exists or is no longer required:

Delete this Outfall

Provide the reason this outfall is being deleted.

Outfall Location No Longer Exists

Outfall Identifier

001

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0

Outfalls (2 of 2)

003

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

003

Receiving Water

Alabama River

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

None apply

Estimated Average Daily Flow (MGD)

0.010

Monitoring/Sampling Point Location

32.376992,-86.986608

Stormwater Outfalls (1 of 2)

002

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

002

Receiving Water

Alabama River

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

None apply

Monitoring/Sampling Point Location

32.378978814575014,-86.99037172602412

Stormwater Outfalls (2 of 2)

SW01

Please click below if this discharge no longer exists or is no longer required:

NONE PROVIDED

Outfall Identifier

SW01

Receiving Water

Tarver Creek

Does the discharge enter the named receiving water via an unnamed tributary?

NONE PROVIDED

Indicate if either of the following characteristics apply to this discharge:

Stormwater only (no comingled process waste water excluding air conditioner condensate and fire testing waters)

Monitoring/Sampling Point Location

32.37445501402096,-86.98691198731173

Process Flow Schematic with Wastewater Treatment(s), If Applicable

For an example of a *process flow diagram*, please use the link below.

[Figure 1: Example of Process Flow Schematic](#)

Process Flow Schematic

[GMI Water Flow Schematic 2024.pdf - 03/14/2024 05:23 PM](#)

Comment

NONE PROVIDED

Anti-Degradation Evaluation

Is this a new or increased discharge that began after April 3, 1991?

Yes

Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced above?

No

NOTE

If the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions below, ADEM Form 311-Alternatives Analysis, and either ADEM Form 312 or ADEM Form 313- Calculation of Total Annualized Project Costs

(Public-Sector or Private-Sector Projects, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable.
[ADEM forms can be found on the Department's website here.](#)

What environmental or public health problem will the discharger be correcting?

There is no environmental or public health problem to be corrected.

How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?

When in operation, the existing facility employs 100 employees. The relocation of the proposed discharge will allow the current facility to continue in operation and maintain the employment of these 100 employees.

How much reduction in employment will the discharger be avoiding?

Existing 14 employees at the facility and 100 employees when in full operation.

How much additional state or local taxes will the discharger be paying?

When in full operation, facility will pay approximately \$300,000 in state and local taxes annually.

What public service to the community will the discharger be providing?

Continued employment of 100 employees at the facility when fully operational.
 Continued production of final product as demanded by customers.

What economic or social benefit will the discharger be providing to the community?

Continued employment of 100 employees at the facility when fully operational.
 Continued economic and social benefits of the existing facility by continuing to pay state and local taxes.

Attach Form 311, Form 312, or Form 313

[FGM 2024 Form 311 05032024.pdf - 05/05/2024 04:03 PM](#)

[FGM 2024 Form 313 05032024.pdf - 05/05/2024 04:03 PM](#)

Comment

NONE PROVIDED

Additional Information

Do you share an outfall with another facility?

No

Indicate if automatic sampling equipment or continuous wastewater flow metering equipment is being operated at this facility:

Current	Yes/No
Continuous Wastewater Flow Metering Equipment	Yes
Automatic Sampling Equipment	No

Indicate if installation automatic sampling equipment or continuous wastewater flow metering equipment planned at this facility:

Planned	Yes/No
Continuous Wastewater Flow Metering Equipment	N/A
Automatic Sampling Equipment	No

Please describe the equipment below:

Inline flow meter in cooling tower blowdown line.

Please attach the process schematic with sampling equipment locations.

[GMI Water Flow Schematic.pdf - 09/12/2023 12:50 PM](#)

Comment

NONE PROVIDED

Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics (Consider production processes as well as air or water pollution treatment processes that may affect the discharge.)?

No

Do you use biocides, corrosion inhibitors, or chemical additives in your cooling or blowdown water?

Yes

The applicant must provide a list of the following information for each biocide or chemical:

- (1) Name and general composition of biocide or chemical (if composition is not provided on MSDS sheet)
- (2) 48-hour or 96-hour LC50 data for organisms representative of the biota of the waterway into which the discharge will ultimately reach. For freshwater, the fathead minnow (*Pimephales promelas*) and cladoceran (*Ceriodaphnia dubia*) are the test organisms. For salt water, the mysid shrimp and the sheepshead minnow or inland silverside are the test organisms. Other acceptable aquatic organisms may be allowed by the Department if sufficient information is provided. If the MSDS sheet does not provide data for the organisms specified above, the facility must provide the data unless the Department grants approval for an alternate organism.
- (3) Quantities to be used
- (4) Frequencies of use
- (5) Maximum proposed discharge concentrations
- (6) EPA registration of number, if applicable and is not provided on the MSDS sheet.

List of Biocides

Please list biocides below:
Biocide One
Biocide 18

Biocide/Corrosion Inhibitor Summary Sheet

NONE PROVIDED
Comment
NONE PROVIDED

Safety Data Sheets (SDS)

[GMI Cooling Tower Chemicals 2024.pdf - 03/14/2024 05:11 PM](#)
Comment
NONE PROVIDED

Treatment

Is any form of wastewater treatment (see list below) practiced at this facility?
No

Is any form of wastewater treatment (or changes to an existing wastewater treatment) planned for this facility within the next three years?
No

Facility Operational Characteristics

Indicate whether the facility discharge is:
Continuous through the year

Comments:
NONE PROVIDED

Non-Discharged Wastes

Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?
No

Does any outside firm remove any of the above checked wastes?
No

EPA Application Forms

All Applicants must submit certain EPA permit application forms. More than one application form may be required.

Form 1 - General Information Form required for all applications

Form 2C - Should be submitted for facilities with existing discharge(s) of process wastewater.

Form 2D - Should be submitted for facilities that have not yet commenced discharge(s) of process wastewater.

Form 2E - Should be submitted for facilities who discharge non-process wastewater, such as non-contact cooling water or boiler blowdown.

Form 2F - Should be submitted for all discharges of storm water associated with an industrial activity.
The EPA application forms are found on the Department's website [here](#).

EPA Form 1

GMI Form 1 2024.pdf - 03/14/2024 05:02 PM

Comment

NONE PROVIDED

Additional EPA Forms (EPA Form 2C, 2D, 2E and/or 2F)

GMI Form 2E 2024 Outfall 003.pdf - 03/14/2024 05:02 PM

Comment

NONE PROVIDED

Other attachments (as needed)

GMI Site Map 2024 (11x17).pdf - 03/14/2024 05:05 PM

Comment

NONE PROVIDED

Additional Attachments

Please attach any additional information as needed.

NONE PROVIDED

Comment

NONE PROVIDED

Application Preparer

Application Preparer

Prefix

NONE PROVIDED

First Name Last Name

Randy McGough

Title

Consultant

Organization Name

R.E. McGough

Phone Type Number Extension

Business 2053456399

Email

RANDY@REMGOUGH.COM

Address

1655 McFarland Blvd N.

Suite 169

Tuscaloosa, Alabama 35406

Revisions

Revision	Revision Date	Revision By
Revision 1	9/12/2023 10:51 AM	Randy McGough
Revision 2	3/14/2024 9:03 AM	Randy McGough
Revision 3	4/8/2024 8:54 AM	Randy McGough

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- I am the owner of the account used to perform the electronic submission and signature.
- I have the authority to submit the data on behalf of the facility I am representing.
- I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted; based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

"I further certify under penalty of law that all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested."

NOTE: 335-6-5-.14 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

The application shall be signed by a responsible official, a request for variance from categorical pretreatment standards, and a category determination request shall be signed by a responsible official, as indicated below

- *In the case of a corporation, by a principal executive officer of at least the level of vice president;*
- *In the case of a partnership, by a general partner;*
- *In the case of a sole proprietorship, by the proprietor; or*
- *In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official*

Signed Matthew Greene on 05/06/2024 at 9:37 AM
By


Attachment 1 to Supplementary Form ADEM Form 311

Alternatives Analysis

Applicant/Project: Ferroglobe USA Metallurgical, Inc

All new or expanded discharges (except discharges eligible for coverage under general permits) covered by the NPDES permitting program are subject to the provisions of ADEM's antidegradation policy. Applicants for such discharges to Tier 2 waters are required to demonstrate "... that the proposed discharge is necessary for important economic or social development." As a part of this demonstration, the applicant must complete an evaluation of the discharge alternatives listed below, including a calculation of the total annualized project costs for each technically feasible alternative (using ADEM Form 312 for public-sector projects and ADEM Form 313 for private-sector projects). Alternatives with total annualized project costs that are less than 110% of the total annualized project costs for the Tier 2 discharge proposal are considered viable alternatives.

Alternative	Viable	Non-Viable	Comment
1 Land Application		x	See Attached Comments
2 Pretreatment/Discharge to POTW		x	See Attached Comments
3 Relocation of Discharge		x	See Attached Comments
4 Reuse/Recycle		x	See Attached Comments
5 Process/Treatment Alternatives		x	See Attached Comments
6 On-site/Sub-surface Disposal		x	See Attached Comments
<i>(other project-specific alternatives considered by the applicant; attach additional sheets if necessary)</i>			
7			
8			
9			

<p>Pursuant to ADEM Administrative Code Rule 335-6-3-.04, I certify on behalf of the applicant that I have completed an evaluation of the discharge alternatives identified above, and reached the conclusions indicated.</p>	<p>Signature: <u></u> (Professional Engineer)</p> <p>Date: <u>5/3/2024</u></p>
---	--

(Supporting documentation to be attached, referenced, or otherwise handled as appropriate.)

NPDES Permit Modification Attachments

Permit: AL0025216

Permittee: Ferroglobe USA Metallurgical

Form 311: Alternative Analysis

Alternative 1: Land Application The proposed discharge is for a relocation of an existing discharge and land application is not a viable alternative because that would still result in a type of discharge.

Alternative 2: Pretreatment/Discharge to POTW

The proposed discharge is for a relocation of an existing discharge and pretreatment of the blowdown is already accomplished but there is not a connection to the local POTW for this discharge so this not a viable alternative.

Alternative 3: Relocation of Discharge

The proposed discharge is for a relocation of an existing discharge and relocation to an alternate location to avoid discharge under this existing permit is not a viable alternative.

Alternative 4: Reuse/Recycle

The proposed discharge is for a relocation of an existing discharge and the blowdown only occurs as needed to maintain balance in the closed loop system so a certain level of recycle is inherent to the system. Since blowdown must occur to maintain the balance and proper operation of the cooling system, this is not a viable alternative.

Alternative 5: Process/Treatment Alternatives

The proposed discharge is for a relocation of an existing discharge and the blowdown only occurs as needed to maintain balance in the closed loop system. The cooling system must exist and operate to maintain cooling as needed for the process equipment; therefore, this is not a viable alternative.

Alternative 6: On-site/Sub-surface Disposal

The proposed discharge is for a relocation of an existing discharge and land application is not a viable alternative because that would still result in a type of discharge.


Ferroglobe USA Metallurgical, Inc.
AL0052516

**Calculation of Total Annualized Project Costs
for Private-Sector Projects**

Capital Costs to be Financed (Supplied by applicant)	<u>\$ 0 (1)</u>
Interest rate for Financing (Expressed as a decimal)	<u>(i)</u>
Time Period of Financing (Assume 10 years*)	<u>10 years (n)</u>
Annualization Factor = $\frac{i}{(1+i)^{10} - 1} + i$	<u>0 (2)</u>
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 0 (3)</u>
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	<u>\$ 6,840 (4)</u>
Total Annual Cost of Pollution Control Project [(3) + (4)]	\$ 6,840 (5)

* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

Form 1 NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater GENERAL INFORMATION
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SECTION 1. ACTIVITIES REQUIRING AN NPDES PERMIT (40 CFR 122.21(f) and (f)(1))

Activities Requiring an NPDES Permit	1.1	Applicants Not Required to Submit Form 1		
	1.1.1	Is the facility a new or existing publicly owned treatment works ? If yes, STOP. Do NOT complete <input checked="" type="checkbox"/> No Form 1. Complete Form 2A.	1.1.2	Is the facility a new or existing treatment works treating domestic sewage ? If yes, STOP. Do NOT <input checked="" type="checkbox"/> No complete Form 1. Complete Form 2S.
	1.2	Applicants Required to Submit Form 1		
	1.2.1	Is the facility a concentrated animal feeding operation or a concentrated aquatic animal production facility ? <input type="checkbox"/> Yes → Complete Form 1 <input checked="" type="checkbox"/> No and Form 2B.	1.2.2	Is the facility an existing manufacturing, commercial, mining, or silvicultural facility that is currently discharging process wastewater ? <input type="checkbox"/> Yes → Complete Form <input checked="" type="checkbox"/> No 1 and Form 2C.
	1.2.3	Is the facility a new manufacturing, commercial, mining, or silvicultural facility that has not yet commenced to discharge ? <input type="checkbox"/> Yes → Complete Form 1 <input checked="" type="checkbox"/> No and Form 2D.	1.2.4	Is the facility a new or existing manufacturing, commercial, mining, or silvicultural facility that discharges only nonprocess wastewater ? <input checked="" type="checkbox"/> Yes → Complete Form <input type="checkbox"/> No 1 and Form 2E.
	1.2.5	Is the facility a new or existing facility whose discharge is composed entirely of stormwater associated with industrial activity or whose discharge is composed of both stormwater and non-stormwater ? <input checked="" type="checkbox"/> Yes → Complete Form 1 <input type="checkbox"/> No and Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15).		

SECTION 2. NAME, MAILING ADDRESS, AND LOCATION (40 CFR 122.21(f)(2))

Name, Mailing Address, and Location	2.1	Facility Name		
		Ferroglobe USA Metallurgical, Inc.		
	2.2	EPA Identification Number		
		ALD051235562		
	2.3	Facility Contact		
		Name (first and last) Jason Kearns	Title Plant Manager	Phone number (334) 874-2017
	Email address jkearns@ferroglobe.com			
2.4	Facility Mailing Address			
	Street or P.O. box 2401 Old Montgomery Highway			
	City or town Selma	State AL	ZIP code 36703	

EPA Identification Number ALD051235562	NPDES Permit Number AL0025216	Facility Name Ferroglobe USA Metallurgical,
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Form Approved 03/05/19
OMB No. 2040-0004

Name, Mailing Address, and Location Continued	2.5	Facility Location		
		Street, route number, or other specific identifier 2401 Old Montgomery Highway		
		County name Dallas	County code (if known)	
		City or town Selma	State AL	ZIP code 36703

SECTION 3. SIC AND NAICS CODES (40 CFR 122.21(f)(3))

SIC and NAICS Codes	3.1	SIC Code(s)	Description (optional)
		3313	Electrometallurgical Products
	3.2	NAICS Code(s)	Description (optional)

SECTION 4. OPERATOR INFORMATION (40 CFR 122.21(f)(4))

Operator Information	4.1	Name of Operator		
		Globe Metallurgical, Inc.		
	4.2	Is the name you listed in Item 4.1 also the owner? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
	4.3	Operator Status <input type="checkbox"/> Public—federal <input type="checkbox"/> Public—state <input type="checkbox"/> Other public (specify) _____ <input checked="" type="checkbox"/> Private <input type="checkbox"/> Other (specify) _____		
Operator Information Continued	4.4	Phone Number of Operator		
		(740) 984-2361		
	4.5	Operator Address		
	Street or P.O. Box P.O. Box 157			
	City or town Beverly	State OH	ZIP code 45715	
	Email address of operator mgreene@ferroglobe.com			

SECTION 5. INDIAN LAND (40 CFR 122.21(f)(5))

Indian Land	5.1	Is the facility located on Indian Land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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EPA Identification Number ALD051235562	NPDES Permit Number AL0025216	Facility Name Ferroglobe USA Metallurgical,
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Form Approved 03/05/19
OMB No. 2040-0004

SECTION 6. EXISTING ENVIRONMENTAL PERMITS (40 CFR 122.21(f)(6))

Existing Environmental Permits	6.1	Existing Environmental Permits (check all that apply and print or type the corresponding permit number for each)		
	<input checked="" type="checkbox"/>	NPDES (discharges to surface water) AL0025216	<input checked="" type="checkbox"/> RCRA (hazardous wastes) ALD051235562	<input type="checkbox"/> UIC (underground injection of fluids)
	<input type="checkbox"/>	PSD (air emissions) 104-0001	<input type="checkbox"/> Nonattainment program (CAA)	<input type="checkbox"/> NESHAPs (CAA)
	<input type="checkbox"/>	Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)	<input type="checkbox"/> Other (specify)

SECTION 7. MAP (40 CFR 122.21(f)(7))

Map	7.1	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.)
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> CAFO—Not Applicable (See requirements in Form 2B.)

SECTION 8. NATURE OF BUSINESS (40 CFR 122.21(f)(8))

Nature of Business	8.1	Describe the nature of your business. Silicon Metal Production Ferrosilicon Production (Approved but no production)

SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(f)(9))

Cooling Water Intake Structures	9.1	Does your facility use cooling water? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 10.1.
	9.2	Identify the source of cooling water. (Note that facilities that use a cooling water intake structure as described at 40 CFR 125, Subparts I and J may have additional application requirements at 40 CFR 122.21(r). Consult with your NPDES permitting authority to determine what specific information needs to be submitted and when.) On site well.

SECTION 10. VARIANCE REQUESTS (40 CFR 122.21(f)(10))


Variance Requests	10.1	Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(m)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)	
	<input type="checkbox"/>	Fundamentally different factors (CWA Section 301(n))	<input type="checkbox"/> Water quality related effluent limitations (CWA Section 302(b)(2))
	<input type="checkbox"/>	Non-conventional pollutants (CWA Section 301(c) and (g))	<input type="checkbox"/> Thermal discharges (CWA Section 316(a))
	<input checked="" type="checkbox"/>	Not applicable	

EPA Identification Number ALD051235562	NPDES Permit Number AL0025216	Facility Name Ferroglobe USA Metallurgical,
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Form Approved 03/05/19
OMB No. 2040-0004

SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement	11.1	In Column 1 below, mark the sections of Form 1 that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.	
		Column 1	Column 2
	<input checked="" type="checkbox"/>	Section 1: Activities Requiring an NPDES Permit	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 2: Name, Mailing Address, and Location	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 3: SIC Codes	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 4: Operator Information	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 5: Indian Land	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 6: Existing Environmental Permits	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 7: Map	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/>	Section 8: Nature of Business	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 9: Cooling Water Intake Structures	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 10: Variance Requests	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 11: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments
11.2	Certification Statement		
	<i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>		
	Name (print or type first and last name) Jason Kearns	Official title Plant Manager	
	Signature	Date signed	

FORM 2E NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL FACILITIES WHICH DISCHARGE ONLY NONPROCESS WASTEWATER
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SECTION 1. OUTFALL LOCATION (40 CFR 122.21(h)(1))

Outfall Location	1.1	Provide information on each of the facility's outfalls in the table below.							
		Outfall Number	Receiving Water Name	Latitude		Longitude			
		003	Alabama River	32°	22'	37.2" N	86°	59'	11.8" W
				°	'	"	°	'	"

SECTION 2. DISCHARGE DATE (40 CFR 122.21(h)(2))

Discharge Date	2.1	Are you a new or existing discharger? (Check only one response.)	
		<input type="checkbox"/> New discharger	<input checked="" type="checkbox"/> Existing discharger → SKIP to Section 3.
	2.2	Specify your anticipated discharge date:	

SECTION 3. WASTE TYPES (40 CFR 122.21(h)(3))

Waste Types	3.1	What types of wastes are currently being discharged if you are an existing discharger or will be discharged if you are a new discharger? (Check all that apply.)	
		<input type="checkbox"/> Sanitary wastes	<input type="checkbox"/> Other nonprocess wastewater (describe/explain directly below)
		<input type="checkbox"/> Restaurant or cafeteria waste	
		<input checked="" type="checkbox"/> Non-contact cooling water	
	3.2	Does the facility use cooling water additives?	
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No → SKIP to Section 4.
	3.3	List the cooling water additives used and describe their composition.	
		Cooling Water Additives (list)	Composition of Additives (if available to you)
		See Enclosed List & SDS	See Enclosed List & SDS

SECTION 4. EFFLUENT CHARACTERISTICS (40 CFR 122.21(h)(4))

Effluent Characteristics	4.1	Have you completed monitoring for all parameters in the table below at each of your outfalls and attached the results to this application package?						
		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No; a waiver has been requested from my NPDES permitting authority (attach waiver request and additional information) → SKIP to Section 5.					
	4.2	Provide data as requested in the table below. ¹ (See instructions for specifics.)						
		Parameter or Pollutant	Number of Analyses (if actual data reported)	Maximum Daily Discharge (specify units)		Average Daily Discharge (specify units)	Source (use codes per instructions)	
				Mass	Conc.	Mass	Conc.	
		Biochemical oxygen demand (BOD ₅)	1	<0.1 ppd	<2.0 ppm	ppd	<2. ppm	1
		Total suspended solids (TSS)	1	0.1 ppd	5 ppm	ppd	5 ppm	1
		Oil and grease	1	<0.1 ppd	<5.0 ppm	ppd	<5 ppm	1
		Ammonia (as N)	1	<0.01 ppd	<0.14 ppm	ppd	<0.14	1
		Discharge flow	1	0.053 MGD				135
	pH (report as range)	1	7.1 - 8.5 S.U.				134	
	Temperature (winter)	1	80 F				67	
	Temperature (summer)	1	85 F				67	

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

Effluent Characteristics Continued	4.3	Is fecal coliform believed present, or is sanitary waste discharged (or will it be discharged)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 4.5.						
	4.4	Provide data as requested in the table below. ¹ (See instructions for specifics.)						
		Parameter or Pollutant	Number of Analyses <small>(if actual data reported)</small>	Maximum Daily Discharge <small>(specify units)</small>		Average Daily Discharge <small>(specify units)</small>		Source <small>(Use codes per Instructions.)</small>
				Mass	Conc.	Mass	Conc.	
		Fecal coliform						
	<i>E. coli</i>							
	Enterococci							
	4.5	Is chlorine used (or will it be used)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 4.7.						
	4.6	Provide data as requested in the table below. ¹ (See instructions for specifics.)						
		Parameter or Pollutant	Number of Analyses <small>(if actual data reported)</small>	Maximum Daily Discharge <small>(specify units)</small>		Average Daily Discharge <small>(specify units)</small>		Source <small>(use codes per instructions)</small>
			Mass	Conc.	Mass	Conc.		
Total Residual Chlorine		1	<0.01 ppd	<0.01 ppm	<0.01 ppd	<0.01 pp	1	
4.7	Is non-contact cooling water discharged (or will it be discharged)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 5.							
4.8	Provide data as requested in the table below. ¹ (See instructions for specifics.)							
	Parameter or Pollutant	Number of Analyses <small>(if actual data reported)</small>	Maximum Daily Discharge <small>(specify units)</small>		Average Daily Discharge <small>(specify units)</small>		Source <small>(use codes per instructions)</small>	
			Mass	Conc.	Mass	Conc.		
	Chemical oxygen demand (COD)	1	0.6 ppd	21 ppm	0.6 ppd	21 ppm	1	
Total organic carbon (TOC)	1	0.2 ppd	5.9 ppm	0.2 ppd	5.9 ppm	1		

SECTION 5. FLOW (40 CFR 122.21(h)(5))

Flow	5.1	Except for stormwater water runoff, leaks, or spills, are any of the discharges you described in Sections 1 and 3 of this application intermittent or seasonal? <input type="checkbox"/> Yes → Complete this section. <input checked="" type="checkbox"/> No → SKIP to Section 6.					
	5.2	Briefly describe the frequency and duration of flow.					

SECTION 6. TREATMENT SYSTEM (40 CFR 122.21(h)(6))

Treatment System	6.1	Briefly describe any treatment system(s) used (or to be used). None				
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¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter I, subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

EPA Identification Number ALD051235562	NPDES Permit Number AL0025216	Facility Name Ferroglobe USA Metallurgical, Inc.
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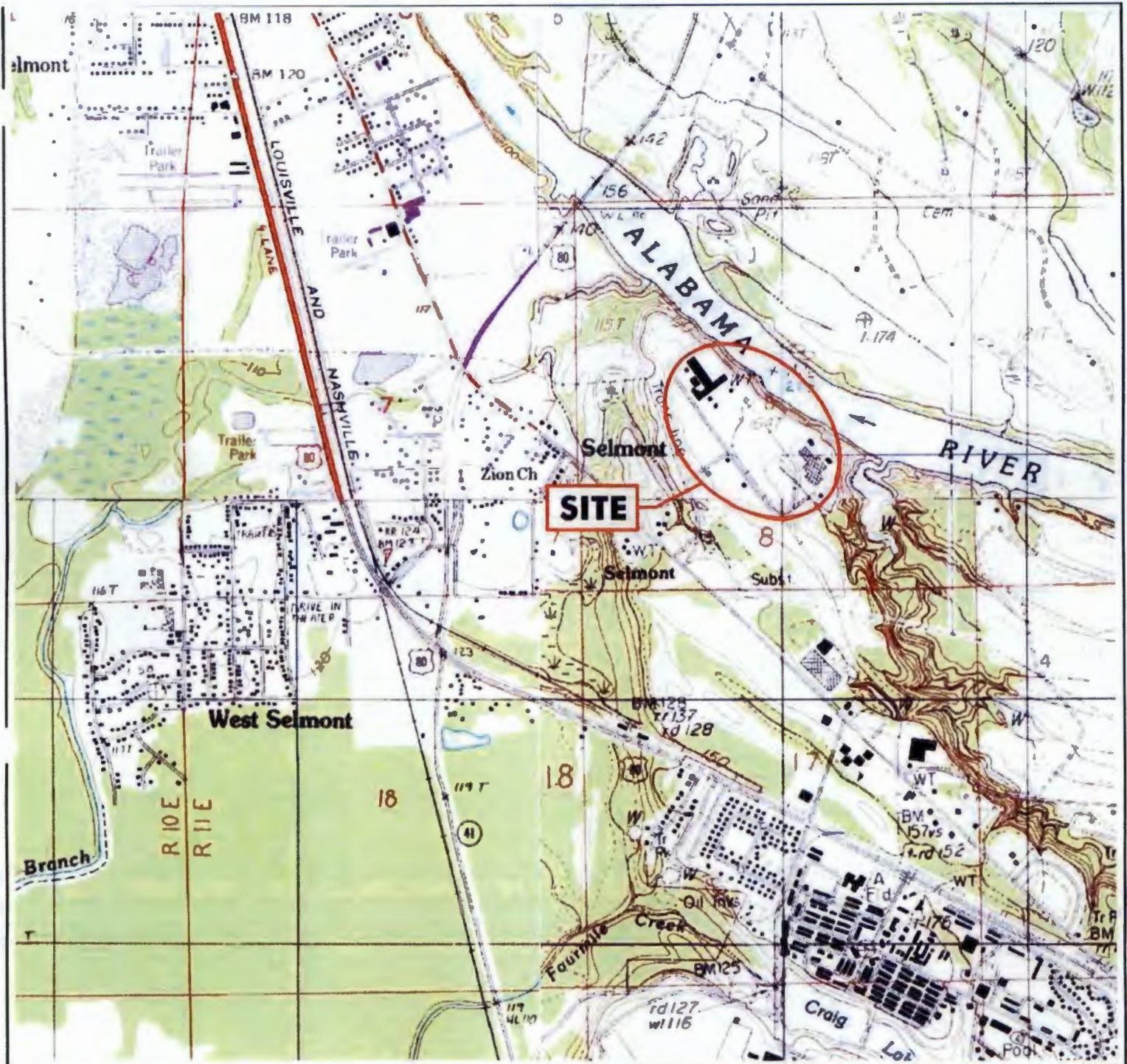
Form Approved 03/05/19
OMB No. 2040-0004

SECTION 7. OTHER INFORMATION (40 CFR 122.21(h)(7))

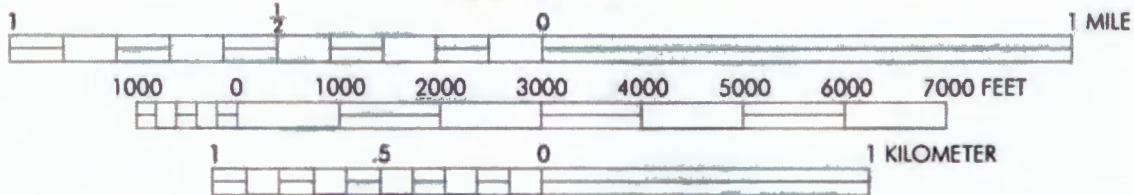
Other Information	7.1	Use the space below to expand upon any of the above items. Use this space to provide any information you believe the reviewer should consider in establishing permit limitations. Attach additional sheets as needed. The facility currently discharges cooling tower blowdown at Outfall 001 which is combined with storm water and discharges to Tarver Creek. The facility is proposing to relocate the cooling tower blowdown to discharge at a new Outfall 003 which will discharge cooling tower blowdown only to the Alabama River.
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SECTION 8. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement	8.1	In Column 1 below, mark the sections of Form 2E that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.							
		Column 1	Column 2						
		<input checked="" type="checkbox"/> Section 1: Outfall Location	<input type="checkbox"/> w/ attachments (e.g., responses for additional outfalls)						
		<input checked="" type="checkbox"/> Section 2: Discharge Date	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 3: Waste Types	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 4: Effluent Characteristics	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 5: Flow	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 6: Treatment System	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 7: Other Information	<input type="checkbox"/> w/ attachments						
		<input checked="" type="checkbox"/> Section 8: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments						
	8.2	<p>Certification Statement</p> <p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p> <table border="1" style="width: 100%;"> <tr> <td>Name (print or type first and last name)</td> <td>Official title</td> </tr> <tr> <td>Jason Kearns</td> <td>Plant Manager</td> </tr> <tr> <td>Signature</td> <td>Date signed</td> </tr> </table>		Name (print or type first and last name)	Official title	Jason Kearns	Plant Manager	Signature	Date signed
Name (print or type first and last name)	Official title								
Jason Kearns	Plant Manager								
Signature	Date signed								



Scale 1:24000



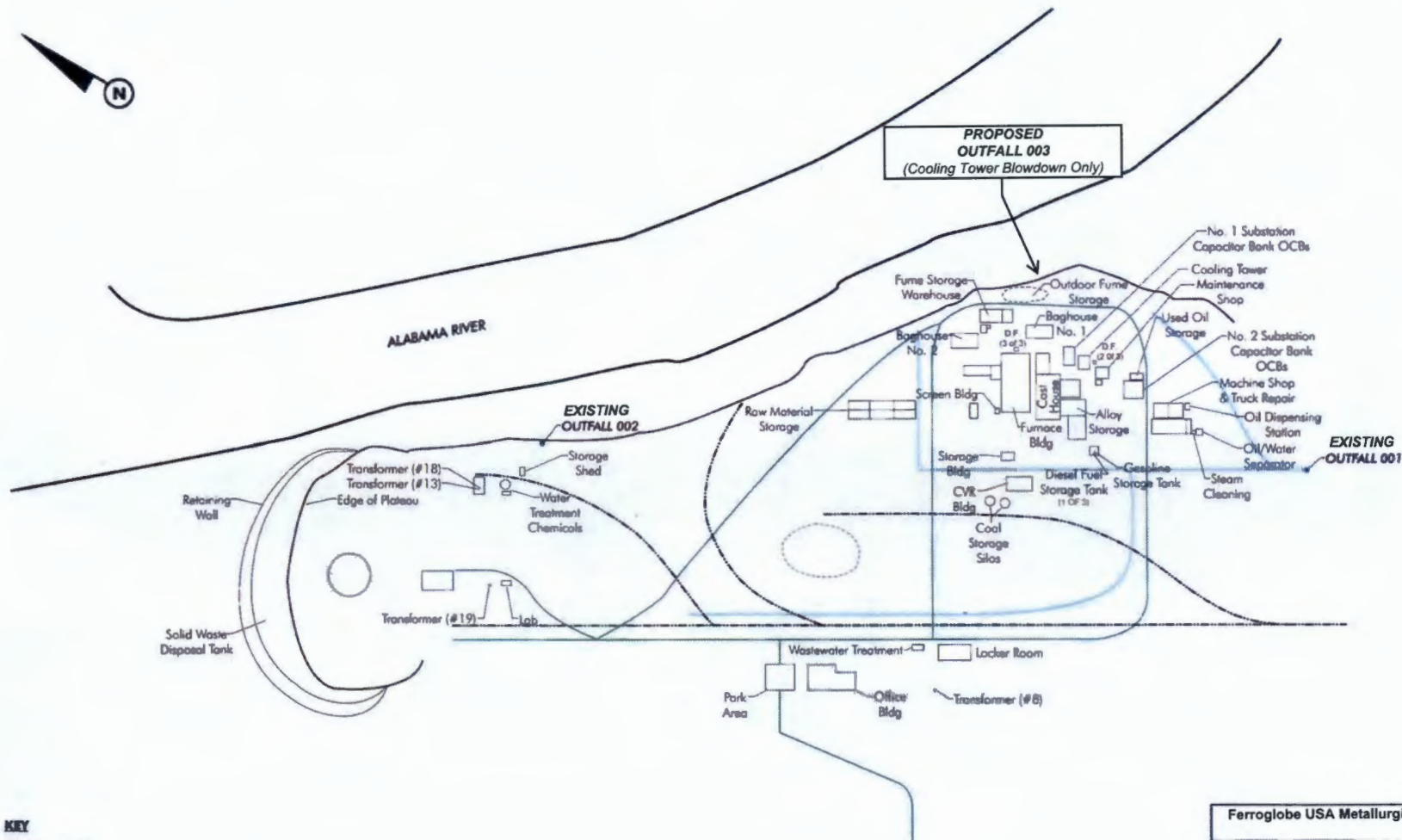
Prepared by:
 R.E. McGough
 1655 McFarland Blvd. N.
 Suite 169
 Tuscaloosa, AL 35406

BASE MAP SOURCE:
 USGS 7 1/2 minute topographic
 quadrangle maps. Burnsville, AL;
 Selma, AL; Blackwell Bend, AL; and
 Sardis, AL.

Reference:
 Ferroglobe USA Metallurgical, Inc.
 2401 Old Montgomery Road
 Selma, Alabama 36703

Date: March 2024

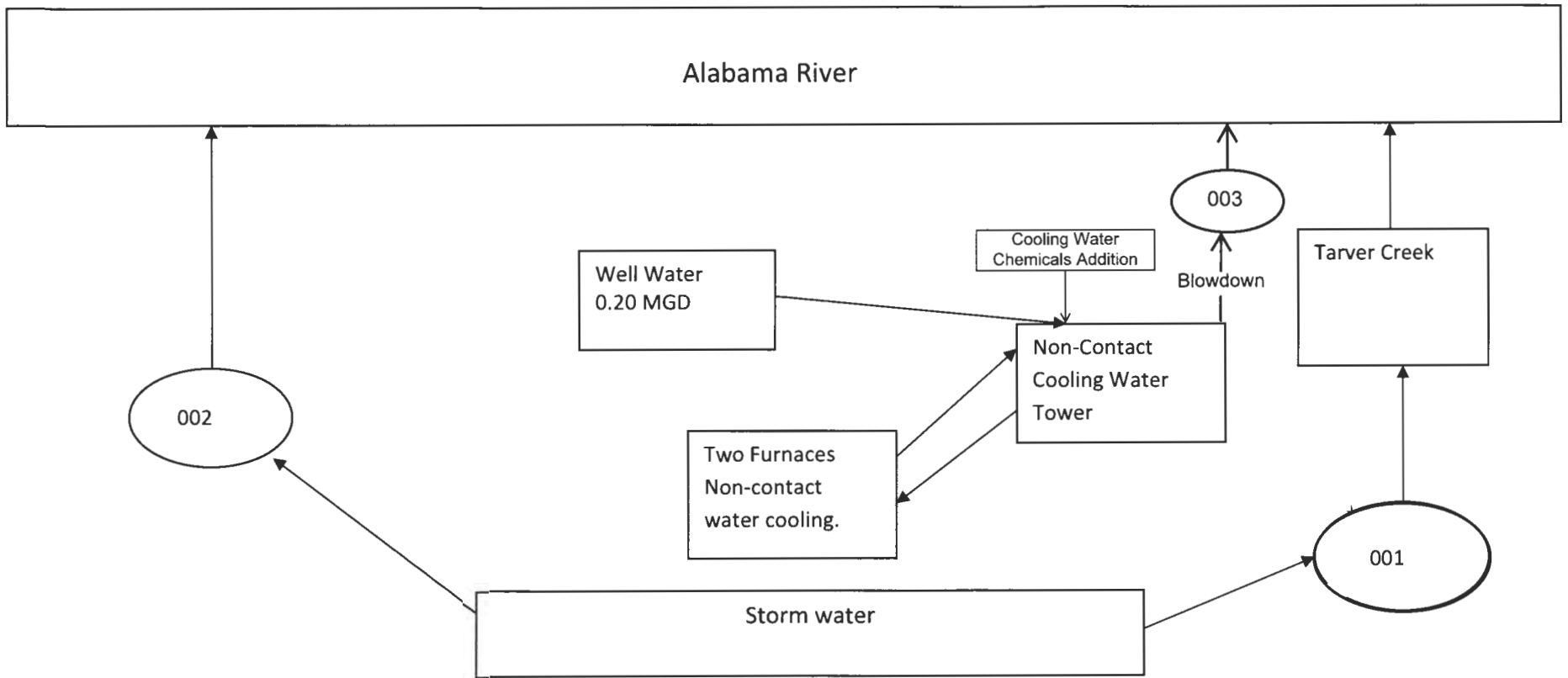
Figure 1
Site Location
Map



- KEY**
- Drainage Ditch
 - Roads
 - Railroad

Ferroglobe USA Metallurgical, Inc.	
Figure 2 Site Plan	
Revision: 1	
Date: September 2023	

Figure 3
Ferroglobe USA Metallurgical Inc. – Selma Plant
Water Flow Schematic September 2023



Note: All required sampling performed at Outfalls

January 25, 2023

Alabama Dept. of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Re: **Responsible Official Delegation/Authorization**
Globe Metallurgical, Inc
Selma, Dallas County, AL
Air Permit No: 104-0001
NPDES Permit No: AL0025216
Site ID: ALD051235562

Dear Sir/Madam:

This letter is to notify the Alabama Department of Environmental Management that Mr. Jason Kearns, Plant Manager, is authorized to serve as Responsible Official for the above referenced facility. This authorization includes signatory authorization for all documents that may be required by ADEM.

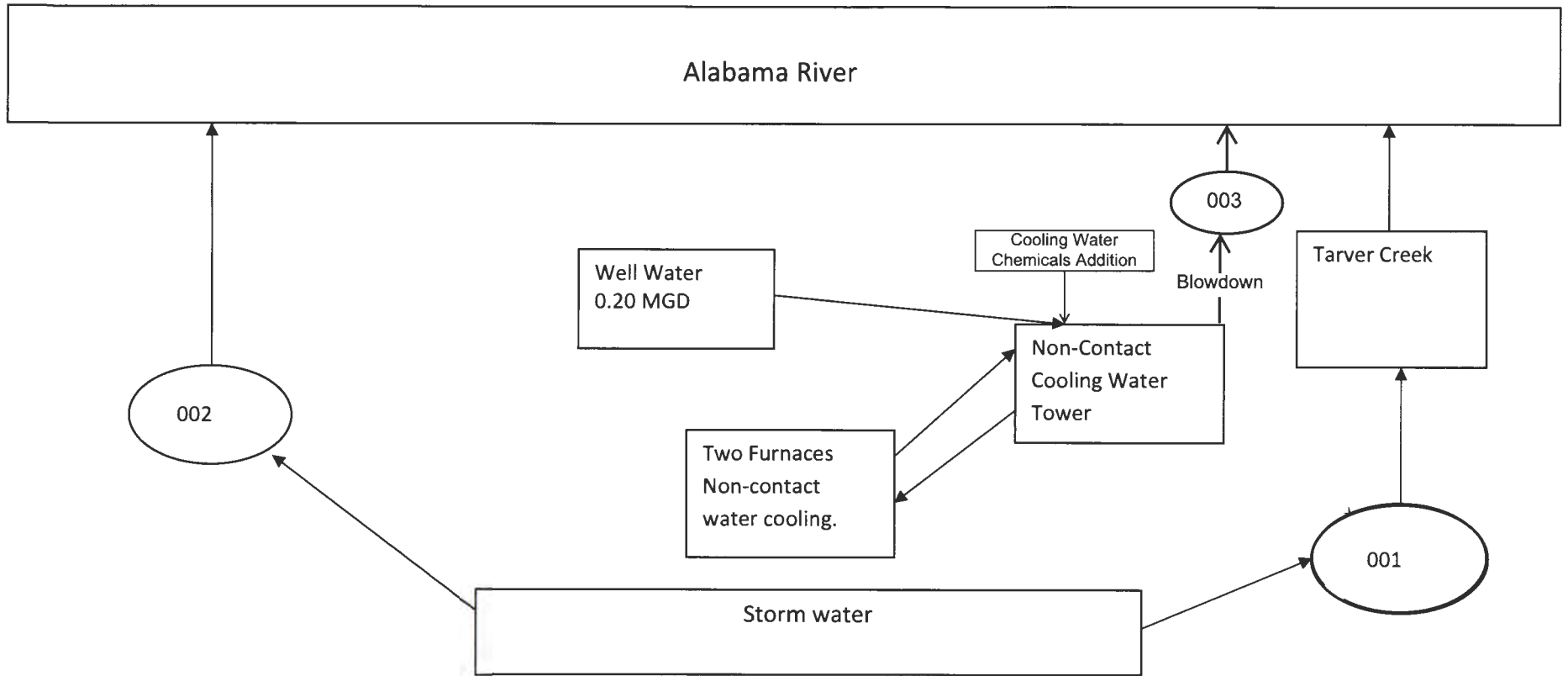
If you have any questions, please feel free to contact Matt Greene at 740-984-8608 by email at mgreene@ferroglobe.com.

Sincerely,



Paul Lojek
VP of Operations, Americas

Figure 3
Globe Metallurgical Inc. – Selma Plant
Water Flow Schematic
September 2023



Note: All required sampling performed at Outfalls

Ferroglobe USA Metallurgical, Inc.

Selma, AL

Cooling Water System Chemicals

<u>Product Identifier</u>	<u>Typical Usage</u>
Max S.	3 gal/day
16 T.	2 gal/day
Process 1	32 oz / day
Bio One	5 gal/week
Bio 18	2 gal/day

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/29/2016

Reviewed on 12/29/2016

1 Identification

- **Product identifier** Acid detergent / neutralizer
- **Trade name:** **MAX S**
- **Article number:** LMR90A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) Identification

- **Classification of the substance or mixture**



Health hazard

Carc. 1A H350 May cause cancer.



Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

sulfuric acid

- **Hazard statements**

Causes severe skin burns and eye damage.

May cause cancer.

- **Precautionary statements**

Do not breathe dusts or mists.

Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2016

Reviewed on 12/29/2016

Trade name: **MAX S**

(Contd. of page 1)

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 2

- **HMIS-ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 2

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7664-93-9	sulfuric acid	>95%
-----------	---------------	------

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Remove to fresh air. If symptoms persist consult a doctor.
In case of unconsciousness, immediately seek medical attention.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.
Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

- US

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2016

Reviewed on 12/29/2016

Trade name: MAX S

(Contd. of page 2)

- **After eye contact:**
Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately contact a doctor or Poison Control Center.
Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
7664-93-9	sulfuric acid	0.20 mg/m ³
· PAC-2:		
7664-93-9	sulfuric acid	8.7 mg/m ³
· PAC-3:		
7664-93-9	sulfuric acid	160 mg/m ³

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/29/2016

Reviewed on 12/29/2016

Trade name: MAX S

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep this and all chemicals out of the reach of children.
Store in a cool, dry, well ventilated area.
Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

7664-93-9 sulfuric acid

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 1 mg/m ³
TLV	Long-term value: 0.2* mg/m ³ *as thoracic fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Acid resistant protective clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.

- pH-value at 20 °C (68 °F): < 1

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:**

Decomposition temperature:	Not determined.
-----------------------------------	-----------------

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C (68 °F):** 1.84 g/cm³ (15.355 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water:	Not miscible or difficult to mix.
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- | | |
|---|----------------------|
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| VOC content: | 0.0 g/l / 0.00 lb/gl |
| · Other information No further relevant information available. | |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** When diluting, always add acid to water, never vice versa.
- **Conditions to avoid** Do not mix with alkalies, oxidizers, bleach or ferrous metals.
- **Incompatible materials:**
Alkali (Caustic)
Sodium hypochlorite solutions
- **Hazardous decomposition products:** Sulfur oxides (SO_x)

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** Strong caustic effect on skin and mucous membranes.
 - **on the eye:** Strong caustic effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
 - **Carcinogenic categories**
- | | | |
|--|---------------|---|
| · IARC (International Agency for Research on Cancer) | | |
| 7664-93-9 | sulfuric acid | 1 |
| · NTP (National Toxicology Program) | | |
| 7664-93-9 | sulfuric acid | K |
| · OSHA-Ca (Occupational Safety & Health Administration) | | |
| None of the ingredients is listed. | | |

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Dispose of in accordance with federal, state, and local regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|------------------------|
| · UN-Number | |
| · DOT, IMDG, IATA | UN1830 |
| · UN proper shipping name | |
| · DOT, IMDG | Sulfuric acid |
| · IATA | SULPHURIC ACID |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · Class | 8 Corrosive substances |

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· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	E
· Stowage Code	SW15 For metal drums, stowage category B.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Not applicable.	
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	
UN 1830 SULFURIC ACID, 8, II	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

All ingredients are listed.

· Section 313 (Specific toxic chemical listings):

All ingredients are listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

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<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

<ul style="list-style-type: none"> · Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

- **Carcinogenic categories**

<ul style="list-style-type: none"> · EPA (Environmental Protection Agency)
None of the ingredients is listed.

<ul style="list-style-type: none"> · TLV (Threshold Limit Value established by ACGIH)
7664-93-9 sulfuric acid
A2

<ul style="list-style-type: none"> · NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

sulfuric acid

- **Hazard statements**

Causes severe skin burns and eye damage.

May cause cancer.

- **Precautionary statements**

Keep out of reach of children.

Do not breathe dusts or mists.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Jim Faller/Keith Seyfried
- **Date of preparation / last revision** 12/29/2016 / 2

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Carc. 1A: Carcinogenicity – Category 1A

- *** Data compared to the previous version altered.**

US

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/30/2015

Reviewed on 03/30/2015

1 Identification

- **Product identifier** Industrial water treatment compound
- **Trade name:** **TOWER 16T**
- **Article number:** WTO160A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

0	0
1	0

 - Health = 1
 - Fire = 0
 - Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	0
REACTIVITY	0

 - Health = 1
 - Fire = 0
 - Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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Reviewed on 03/30/2015

Trade name: TOWER 16T

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:	
7631-95-0	Sodium molybdate ≤ 2.5%

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Remove to fresh air. If symptoms persist consult a doctor.
- **After skin contact:**
Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.
- **After eye contact:**
Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.
- **After swallowing:**
Immediately contact a doctor or Poison Control Center.
Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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Trade name: TOWER 16T

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7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep this and all chemicals out of the reach of children.
Store in a cool, dry, well ventilated area.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

7631-95-0 Sodium molybdate

PEL	Long-term value: 5 mg/m ³ as Mo
TLV	Long-term value: 0.5 mg/m ³ as Mo; respirable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing

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Trade name: TOWER 16T

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9 Physical and chemical properties

- Information on basic physical and chemical properties

- General Information

- Appearance:

Form:	Liquid
Color:	Gold colored
· Odor:	Characteristic
· Odor threshold:	Not determined.

- pH-value at 20 °C (68 °F): 5.5

- Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature:

Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

- Vapor pressure: Not determined.

- Density at 20 °C (68 °F): 1.22 g/cm³ (10.181 lbs/gal)

- Relative density: Not determined.

- Vapor density: Not determined.

- Evaporation rate: Not determined.

- Solubility in / Miscibility with

Water: Fully miscible.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity

- Chemical stability

- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- Possibility of hazardous reactions: No dangerous reactions known.

- Conditions to avoid: No further relevant information available.

- Incompatible materials: No further relevant information available.

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Trade name: TOWER 16T

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- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability:** No further relevant information available.

- **Bioaccumulative potential:** No further relevant information available.

- **Mobility in soil:** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Generally not hazardous for water

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:** Dispose of in accordance with federal, state, and local regulations.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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Reviewed on 03/30/2015

Trade name: TOWER 16T

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14 Transport information

· UN-Number	
· DOT, IMDG, IATA	-
· UN proper shipping name	
· DOT, IMDG, IATA	-
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	-
· Packing group	
· DOT, IMDG, IATA	-
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
· Sara	
· Section 355 (extremely hazardous substances):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	

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<ul style="list-style-type: none"> · NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- **Product related hazard informations:**

- Observe the general safety regulations when handling chemicals.

- The product is not subject to identification regulations according to directives on hazardous materials.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Jim Faller/Keith Seyfried

- **Date of preparation / last revision** 03/30/2015 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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Safety Data Sheet
acc. to OSHA HCS


Printing date 03/20/2015

Reviewed on 03/20/2015

1 Identification

- **Product identifier** Industrial water treatment compound
- **Trade name:** **PROCESS 1**
- **Article number:** WPR1A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations according to directives on hazardous materials.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**


Health = 0
Fire = 0
Reactivity = 0
- **HMS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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Trade name: PROCESS 1

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Remove to fresh air. If symptoms persist consult a doctor.
- **After skin contact:**
Generally the product does not irritate the skin.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for a minimum of 15 minutes with running water. If symptoms persist, consult a doctor.
- **After swallowing:**
If symptoms persist consult doctor.
Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep this and all chemicals out of the reach of children.
Store in a cool, dry, well ventilated area.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
- **pH-value at 20 °C (68 °F):** 8

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· Change in condition Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.36 g/cm ³ (11.349 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability** Stable
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

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- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Not known to be hazardous to water.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:** Dispose of in accordance with federal, state, and local regulations.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA** -

- **UN proper shipping name**

- **DOT, IMDG, IATA** -

- **Transport hazard class(es)**

- **DOT, ADR, IMDG, IATA**

- **Class** -

- **Packing group**

- **DOT, IMDG, IATA** -

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- | | |
|---|-----------------|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | - |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):
--

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:
--

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)
--

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)
--

None of the ingredients is listed.

· Product related hazard informations:
--

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.
--

- | |
|--|
| · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. |
|--|

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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- **Contact:** Jim Faller/Keith Seyfried
- **Date of preparation / last revision** 03/20/2015 / -

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

USA



SAFETY DATA SHEET

1. Identification

Product identifier BIOCIDE ONE

Other means of identification

Product code BIOCIDE ONE

Recommended use Microbiocide

Recommended restrictions For Industrial Use Only

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name ZEE Company, Inc.

Address 4146 South Creek Road
Chattanooga, TN 37406
United States

Telephone 423-698-1401

E-mail Not available.

Emergency phone number 1-800-424-9300

2. Hazard(s) identification


Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 1B
Serious eye damage/eye irritation Category 1
Sensitization, skin Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Magnesium nitrate		10377-60-3	1.4 - 2.0
5-Chloro-2-methyl-4-isothiazolin-3-one		26172-55-4	1.1 - 1.35
Magnesium chloride		7786-30-3	1.0 - 1.2
2-Methyl-4-isothiazolin-3-one		2682-20-4	0.35 - 0.45
Other components below reportable levels			95.0 - 96.0

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Not applicable, non-combustible. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe the mist or vapor. Do not get in eyes, on skin, or on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Colorless to Yellow.
Odor	Pungent.
Odor threshold	Not available.
pH	2.0 - 4.0
Melting point/freezing point	26.6 °F (-3 °C)
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	0.62 (Air = 1) estimated
Relative density	Not available.

Solubility(ies)	
Solubility (water)	Complete.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.58 lbs/gal
Specific gravity	1.02

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	May cause an allergic skin reaction.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Ceriodaphnia, 1.5% mixed isothiazolones, 48 hr LC50 0.2 ppm

Daphnia, 14.17% mixed isothiazolones, 48 hr LC50 0.18 ppm

In a chronic toxicity study conducted using fathead minnows, methylisothiazolone (14.17% a.i.) gave a Maximum Allowable Toxicant concentration (MATC) of 0.035 ppm. The MATC (the geometric mean of the NOEL and LOEL), based on significantly reduced weight at 0.06 ppm methylisothiazolone was >0.02 and <0.06 ppm. The guideline requirement for freshwater fish chronic toxicity is fulfilled.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN3265
UN proper shipping name	CORROSIVE LIQUIDS, ACIDIC, ORGANIC, N.O.S. (5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

DOT



15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and its components are either listed on the U.S. Toxic Substance Control Act (TSCA) Inventory or they are exempt from listing.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	
2-Methyl-4-isothiazolin-3-one (CAS 2682-20-4)	1.0 % One-Time Export Notification only.
5-Chloro-2-methyl-4-isothiazolin-3-one (CAS 26172-55-4)	1.0 % One-Time Export Notification only.
CERCLA Hazardous Substance List (40 CFR 302.4):	Not Listed
SARA 304 Emergency release notification:	Not regulated
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):	Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Magnesium nitrate	10377-60-3	1.4 - 2.0

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. Massachusetts RTK - Substance List

Magnesium nitrate (CAS 10377-60-3)

US. New Jersey Worker and Community Right-to-Know Act

Magnesium nitrate (CAS 10377-60-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Magnesium nitrate (CAS 10377-60-3)

US. Rhode Island RTK

Magnesium nitrate (CAS 10377-60-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-31-2015
Version # 01

HMIS® ratings

Health: 3
Flammability: 0
Physical hazard: 0
Personal protection: H

Disclaimer

Seller cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision Information

Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Undisclosed Ingredient Statement
Physical & Chemical Properties: Multiple Properties
Regulatory Information: United States
GHS: Classification

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/24/2015

Reviewed on 06/24/2015

1 Identification

- **Product identifier** Hypochlorite Solution
- **Trade name:** **BIOCIDE 18 (EPA Reg. 6785-4-12446)**
- **Article number:** WBO18A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
ZEE COMPANY, INC.
4146 South Creek Road
Chattanooga, TN 37406
- **Information department:** Technical Services: 423-698-1401
- **Emergency telephone number:** CHEMTREC: 800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**

sodium hypochlorite, solution

- **Hazard statements**

Causes severe skin burns and eye damage.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapors/spray.

Keep away from acids.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

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Reviewed on 06/24/2015

Trade name: **BIOCIDE 18 (EPA Reg. 6785-4-12446)**

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IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Protect from sunlight. Store in a well-ventilated place.

Store away from acids.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	3
FIRE	0
REACTIVITY	0

Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7681-52-9 sodium hypochlorite, solution

· **Identification number(s)**

· **EC number:** 231-668-3

· **Index number:** 017-011-00-1

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7681-52-9	sodium hypochlorite, solution	10-15%
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4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Remove to fresh air. If symptoms persist consult a doctor.

In case of unconsciousness, immediately seek medical attention.

· **After skin contact:**

Remove contaminated clothing and flush area with running water for a minimum of 15 minutes. If irritation persists consult a doctor.

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Reviewed on 06/24/2015

Trade name: BIOCIDE 18 (EPA Reg. 6785-4-12446)

(Contd. of page 2)

- Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Immediately flush open eye with running water for a minimum of 15 minutes. Immediately get medical attention.
 - **After swallowing:**
Immediately contact a doctor or Poison Control Center.
Do not induce vomiting. Rinse mouth out with water, and drink several glasses of water. Never give anything by mouth to an unconscious person.
 - **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Keep away from heat and direct sunlight.
Store in cool, dry place in tightly closed receptacles.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Keep this and all chemicals out of the reach of children.
Store in a cool, dry, well ventilated area.
Do not store in direct sunlight.
- **Information about storage in one common storage facility:**
Store away from oxidizers and acidic materials.
Do not store together with acids.
- **Further information about storage conditions:**
Recommended maximum storage temperature is 85 F.
Shelf life: 6 months at ideal storage conditions
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:

7681-52-9 sodium hypochlorite, solution
--

WEEL Short-term value: 2 mg/m ³
--

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:	Liquid
Color:	Yellow
Odor:	Like chlorine
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** >12· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not applicable.· **Ignition temperature:**

Decomposition temperature:	Not determined.
----------------------------	-----------------

· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not determined.

Density at 20 °C (68 °F):	1.21 g/cm ³ (10.097 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

· **Solubility in / Miscibility with**

Water:	Fully miscible.
--------	-----------------

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	0.0 %
Water:	87.5 %

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· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals such as nickle, cobalt, copper, and iron.
- **Thermal decomposition / conditions to be avoided:** Stable at ambient temperature.
- **Possibility of hazardous reactions** Contact with acids releases toxic gases.
- **Conditions to avoid** Do not mix with acids.
- **Incompatible materials:**
Reducing Agents
Acids, ammonia, reducing agents, combustible materials (such as wood, cloth), organic materials, soft metals, iron, and oxidizable materials.
- **Hazardous decomposition products:** Chlorine

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|---|------|--------------------|
| · LD/LC50 values that are relevant for classification: | | |
| 7681-52-9 sodium hypochlorite, solution | | |
| Oral | LD50 | 5800 mg/kg (mouse) |
- **Primary irritant effect:**
 - **on the skin:** Caustic effect on skin and mucous membranes.
 - **on the eye:** Strong caustic effect.
 - **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
 - **Carcinogenic categories**
- | | |
|---|--|
| · IARC (International Agency for Research on Cancer) | |
| None of the ingredients is listed. | |
- | | |
|--|--|
| · NTP (National Toxicology Program) | |
| None of the ingredients is listed. | |
- | | |
|--|--|
| · OSHA-Ca (Occupational Safety & Health Administration) | |
| None of the ingredients is listed. | |

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** Oncorhynchus tshawytscha, LC50, 96 Hour, 0.038 - 0.065 mg/L
- **Persistence and degradability** No further relevant information available.

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- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
 Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Dispose of in accordance with federal, state, and local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|------------------------|
| UN-Number | |
| DOT, IMDG, IATA | UN1791 |
| UN proper shipping name | |
| DOT, IMDG, IATA | Hypochlorite solutions |
| Transport hazard class(es) | |
| DOT | |
|  | |
| Class | 8 Corrosive substances |
| Label | 8 |
| Class | 8 Corrosive substances |

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· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Hypochlorites
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Not applicable.	
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1791, Hypochlorite solutions, 8, II

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**

sodium hypochlorite, solution

· **Hazard statements**

Causes severe skin burns and eye damage.

· **Precautionary statements**

If on skin: Wash with plenty of soap and water.

Keep out of reach of children.

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapors/spray.

Keep away from acids.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash thoroughly after handling.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Protect from sunlight. Store in a well-ventilated place.

Store away from acids.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Contact:** Jim Faller/Keith Seyfried
- **Date of preparation / last revision** 06/24/2015 / 10

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

- *** Data compared to the previous version altered.**

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