CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT

GALVSTAR L.P.
5134 Loop Road
Jeffersonville, Indiana 47130

(herein known as the Permittee) is hereby authorized to construct the facilities listed in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-019-9559-00089	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

This construction permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)]

Responsible Official:	Steve Ellek
Source Address:	5134 Loop Road, Jeffersonville, Indiana 47130
Mailing Address:	400 Three Springs Drive, Weirton, WV 26062-4989
SIC Code:	3312
County Location:	Clark
County Status:	Attainment for PM10, CO, SO2, and Pb Nonattainment for TSP, VOC, and NOx

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]

The construction and operation of a continuous hot dip galvanize line, with a maximum production capacity of 74 tons per hour, consists of the following equipment:

(a) One (1) lap seam welder that fuses coil ends together to allow continuous line operation;

(b) One (1) alkaline cleaning process consisting of:

(1) one (1) hot soap dip tank equipped with one (1) natural gas burner rated at 5.3 MMBtu per hour;

(2) one (1) hot water dip tank equipped with one (1) natural gas burner rated at 3.0 MMBtu per hour;

(3) one (1) exhaust blower equipped with a demister to remove particulate matter emissions in the airstream of the alkaline cleaning process before it is exhausted to Stack S2;

(c) One (1) natural gas-fired hot air dryer rated at 2.0 MMBtu per hour that dries the steel strip as it exits the alkaline cleaning process;

(d) One (1) two-section annealing furnace equipped with low-NOx burners that exhaust the flue gases to Stack S1:

(1) preheat section rated at 56.0 MMBtu per hour; and

(2) radiant tube section rated at 21.0 MMBtu per hour;

(e) One (1) electrically heated zinc pot;

(f) One (1) dry temper rolling mill;

(g) One (1) tension leveler;

(h) One (1) surface chemical treatment dip tank that applies a protective coating to the surface of the steel;

(i) One (1) natural gas-fired hot air dryer rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank; and

(j) One (1) oil dip tank.

Items (a), (c), and (e) through (j) are not specifically regulated and therefore have not been included in Section D of this permit.

Section B Construction Conditions

B.1 General Construction Conditions

(a) The data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may result in an increase in allowable emissions, the change must be approved by IDEM, OAM.

(b) This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

(c) Notwithstanding Construction Condition B.4, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

(d) When the facility is constructed and placed into operation, the operation conditions required by Section C and Section D shall be met.

B.2 Effective Date of the Permit

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance, unless a petition for a stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Permit Revocation

Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 First Time Operation Permit

This document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM, OAM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

(e) Pursuant to 326 IAC 2-7-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

General Conditions:

C.1 General Operation Conditions

(a) The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by IDEM, OAM.

(b) The Permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

C.2 Transfer of Permit

Pursuant to 326 IAC 2-1-6 (Transfer of Permits), the following requirements shall apply:

(a) In the event that ownership of this continuous hot dip galvanize line is changed, the Permittee shall notify:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within thirty (30) days of the change. Notification shall include the date or proposed date of said change.

(b) A written notification shall be sufficient to transfer the permit from the current owner to the new owner.

(c) IDEM, OAM shall reserve the right to issue a new permit.

C.3 Permit Revocation

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) violation of any condition of this permit;

(b) failure to disclose all the relevant facts, or misrepresentation in obtaining this permit;

(c) changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit;

(d) noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode; or

(e) for any cause which establishes in the judgment of IDEM, OAM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

C.4 Availability of Permit

Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by IDEM, OAM, or other public official having jurisdiction.

C.5 Open Burning

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

C.6 Preventive Maintenance Plan

Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a Preventive Maintenance Plan, including the following information:

(a) identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(b) a description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(c) identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

C.7 Compliance Monitoring Plan - Failure to Take Response Steps

(a) Pursuant to 326 IAC 2-1-3(j), the Permittee shall implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This Condition;

(2) The Compliance Determination and Monitoring Requirements in Section C and Section D of this permit;

(3) The Recordkeeping and Reporting Requirements in Section C and Section D of this permit; and

(4) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment; and

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied; or

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records and reports shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency or upset, the provisions of 326 IAC 1-6 requiring prompt corrective action to mitigate emissions shall apply.

C.8 Malfunction Condition

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to IDEM, OAM or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (Pages 14 and 15 of this permit), or equivalent. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Emission Limitations and Standards:

C.9 Opacity Limitations

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions from the source shall meet the following:

(a) Visible emissions shall not exceed an average of 30% opacity in 24 consecutive readings.

(b) Visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Compliance Determination and Monitoring Requirements:

C.10 Visible Emission Determination

Pursuant to 326 IAC 5, visible emissions observations from the source shall be performed in accordance with the applicable procedures under 326 IAC 5-1-4 and 40 CFR 60, Appendix A, Method 9.

Recordkeeping and Reporting Requirements:

C.11 Emission Reporting Requirement

Pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee shall annually submit an emission statement of the source. This statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015.

The annual emission statement required by this permit shall be considered timely if:

(a) delivered by U.S. mail and postmarked on or before the date it is due; or

(b) delivered by any other method if it is received and stamped by IDEM, OAM on or before the date it is due.

SECTION D.1 FACILITY OPERATION CONDITIONS FOR ALKALINE CLEANING PROCESS

One (1) alkaline cleaning process consisting of:

(1) one (1) hot soap dip tank equipped with one (1) natural gas burner rated at 5.3 MMBtu per hour;

(2) one (1) hot water dip tank equipped with one (1) natural gas burner rated at 3.0 MMBtu per hour; and

(3) one (1) exhaust blower equipped with a demister to remove particulate matter emissions in the airstream of the alkaline cleaning process before it is exhausted to Stack S2.

Emission Limitations and Standards:

D.1.1 Particulate Matter Emissions Limitation

Pursuant to 326 IAC 6-1 (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the alkaline cleaning process at the exhaust outlet of Stack S2 shall not exceed 0.03 grains per dry standard cubic foot (dscf). This is equivalent to 1.29 pounds of PM per hour at a maximum flow rate of 5,000 cubic feet per minute.

Compliance Determination and Monitoring:

D.1.2 Performance Testing

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance test on Stack S2 shall be performed for PM within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. This test shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

D.1.3 Demister Operating Condition

The demister shall be operated at all times when the alkaline cleaning process in operation.

(a) The Permittee shall monitor and record the pressure drop of the demister, at least once per day. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the demister shall be maintained within the range of 0.5 and 2.0 inches of water. This pressure drop range may be adjusted to incorporate the pressure drop determined from a compliant stack test. The Preventive Maintenance Plan for the demister shall contain troubleshooting contingency and corrective actions for when the pressure drop and flow rate readings are outside of the normal range for any one reading.

(b) The instruments used for determining the pressure drop shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

(c) The gauge employed to take the pressure drop across the demister or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm$ 2% of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.

(d) An inspection shall be performed each calendar quarter of the demister. Defective part(s) shall be replaced. A record shall be kept of the results of the inspection and the number of part(s) replaced.

(e) In the event that demister failure has been observed, the affected process will be shut down immediately until the failed unit has been replaced.

Recordkeeping and Reporting Requirements:

D.1.4 Recordkeeping Requirement

The Permittee shall maintain a log of information necessary to demonstrate compliance with Operation Condition D.1.1 as follows:

(a) The Permittee shall maintain daily logs of the parameters established in Operation Condition D.1.3(a), semi-annual logs of the parameters established in Operation Condition D.1.3(b) and quarterly logs of the parameters established in Operation Condition D.1.3(d) shall be maintained for a minimum of 36 months. These records shall be kept at the source location and available within one (1) hour upon verbal request of an IDEM, OAM representative.

(b) Records of required monitoring information shall include, where applicable:

(1) the date, place, and time of sampling or measurements;

(2) the dates analyses were performed;

(3) the company or entity performing the analyses;

(4) the analytic techniques or methods used;

(5) the results of such analyses; and

(6) the operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) copies of all reports required by this permit;

(2) all original strip chart recordings for continuous monitoring instrumentation;

(3) all calibration and maintenance records; and

(4) records of any required preventive maintenance and corrective actions that were implemented. Such records shall briefly describe what was done and indicate who did it. Such records may include, but are not limited to work orders, quality assurance procedures, quality control procedures, operator's standard operating procedures, manufacturer's specifications or their equivalent, and equipment "troubleshooting" guidance.

SECTION D.2 FACILITY OPERATION CONDITIONS FOR THE TWO-SECTION ANNEALING FURNACE

One (1) two-section annealing furnace equipped with low-NOx burners that exhaust the flue gases to Stack S1:

(a) preheat section rated at 56.0 MMBtu per hour; and

(b) radiant tube section rated at 21.0 MMBtu per hour.

Emission Limitations and Standards:

D.2.1 Nitrogen Oxide Emission Limitations

Pursuant to 326 IAC 10-1, the two-section annealing furnace shall:

(a) utilize low-NOx burners to satisfy the requirements of 326 IAC 10-1-1(a)(3); and

(b) not exceed 8.9 pounds of NOx per hour to avoid the requirements of 326 IAC 10-1-4(b)(5).

Compliance Determination and Monitoring:

D.2.2 Performance Testing

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance test on Stack S1 shall be performed for NOx within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. This test shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ?_____, 100 LBS/HR VOC ?_____, 100 LBS/HR SULFUR DIOXIDE ?_____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ?_____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL*SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
MALFUNCTION REPORTED BY: _____TITLE:_____
(SIGNATURE IF FAXED)
MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

REV 3/96 FAX NUMBER - 317 233-5967 *SEE REVERSE

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO2, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	GALVSTAR L.P.
Source Location:	5134 Loop Road, Jeffersonville, Indiana
County:	Clark
Construction Permit No.:	CP-019-9559-00089
SIC Code:	3312
Permit Reviewer:	Michele M. Williams

The Office of Air Management (OAM) has reviewed an application from GALVSTAR L.P., relating to the construction and operation of a continuous hot dip galvanize line, with a maximum production capacity of 74 tons per hour, consisting of the following equipment:

(a) One (1) lap seam welder that fuses coil ends together to allow continuous line operation;

(b) One (1) alkaline cleaning process consisting of:

(1) one (1) hot soap dip tank equipped with one (1) natural gas burner rated at 5.3 MMBtu per hour;

(2) one (1) hot water dip tank equipped with one (1) natural gas burner rated at 3.0 MMBtu per hour;

(3) one (1) exhaust blower equipped with a demister to remove particulate matter emissions in the airstream of the alkaline cleaning process before it is exhausted to Stack S2;

(c) One (1) natural gas-fired hot air dryer rated at 2.0 MMBtu per hour that dries the steel strip as it exits the alkaline cleaning process;

(d) One (1) two-section annealing furnace equipped with low-NOx burners that exhaust the flue gases to Stack S1:

(1) preheat section rated at 56.0 MMBtu per hour; and

(2) radiant tube section rated at 21.0 MMBtu per hour;

(e) One (1) electrically heated zinc pot;

(f) One (1) dry temper rolling mill;

(g) One (1) tension leveler;

(h) One (1) surface chemical treatment dip tank that applies a protective coating to the surface of the steel;

(i) One (1) natural gas-fired hot air dryer rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank; and

(j) One (1) oil dip tank.

The hot dip galvanize operation integrates various operations in a single continuous operation. The company receives steel coils that will be welded together and transferred to hot soap and water dip tanks to clean the surface of the steel prior to annealing. The steel is hot air dried before entering the two-section annealing furnace. The preheat section of the annealing furnace rapidly raises the steel strip temperature by means of direct-fired cold air gas burners before it enters the radiant tube section of the annealing furnace. The radiant tube section indirectly heats the strip to the final annealing temperature. The steel strip continues through the furnace and is either electrically heated to maintain temperature or cooled at controlled rates to final temperature, depending on the anneal cycle required. The steel strip finally exits the furnace through a bath of molten zinc contained in an electrically heated tub referred to as the zinc pot. The thickness of the zinc coating the steel strip is adjusted to final requirements by means of a stream of compressed air. Once dry, the strip is sent through a cooling water tank for final heat adjustment. The strip is dried and sent through a rolling mill (dry temper mill) to refine the surface texture of the coated product. The strip is then sent through a tension leveler to produce a flat product. After leveling, the steel strip is exposed to a liquid stream, which protects the finished zinc surface from oxidation. The strip is dried and depending on customer specifications, a light film of protective oil is applied by flooding oil onto the steel strip. The strip steel is rewound into coil form, sheared at the proper length and weight, removed from the line, packaged and stored until shipment.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S1	Preheat Furnace Exhaust	70	4	27,000	1,000
S2	Cleaner Area Exhaust	70	2	5,000	120

Recommendation

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on March 12, 1998.

Emissions Calculations

The emission calculations are provided in Appendix A. The January 1995 Edition of the EPA AP-42 Emission Factors and NOx emission factors supplied by the burner manufacturer were used to calculate the potential emissions from the source.

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM/PM10)	10.9	118
Sulfur Dioxide (SO_2)	0.234	0.234
Volatile Organic Compounds (VOC)	2.27	2.27
Carbon Monoxide (CO)	21.7	21.7
Nitrogen Oxides (NO_x)	37.3	37.3
Single Hazardous Air Pollutant (HAP)	0	0
Combination of HAPs	0	0

(a) Allowable PM emissions are 10.9 tons per year as determined from the applicability of rule 326 IAC 6-1. The emission calculations are provided in Appendix A (Emission Calculations). Allowable emissions determined from rule 326 IAC 2-2 is 249 tons per year. Because the allowable emissions from 326 IAC 6-1 are more stringent than the allowable emissions from 326 IAC 2-2, rule 326 IAC 6-1 shall be used for the permitting determination.

(b) The allowable PM emissions based on the rules cited are less than the potential emissions before control, therefore, the allowable emissions are used for the permitting determination.

(c) Allowable emissions (as defined in the Indiana Rule) of at least one (1) criteria pollutant are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Clark County has been designated as nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Clark County has been classified as attainment or unclassifiable for PM10, SO2 and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM/PM10	10.9
SO_2	0.234
VOC	2.27
CO	21.7
NO_x	37.3
Single HAP	0
Combination HAPs	0

This new source is not a major stationary source because even though it is one of the 28 listed source categories (Iron and Steel Mill Plants), it does not emit 100 tons per year or more of any regulated pollutant. Therefore, pursuant to 326 IAC 2-2 and 2-3, and 40 CFR 52.21, the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,

(b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or

(c) any combination of HAPs is greater than or equal to 25 tons/year.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

40 CFR Part 60, Subpart Dc (Standards for Small Industrial-Commercial-Institutional Units)

This New Source Performance Standard (NSPS) is applicable to steam generating units for which construction commenced after June 9, 1989, and have a heat input capacity between and including 10 MMBtu per hour and 100 MMBtu per hour. The preheat section of the annealing furnace rated at 56.0 MMBtu/hr and the radiant tube section of the annealing furnace rated at 21.0 MMBtu/hr are subject to the requirements of this rule.

Because the two-section annealing furnace is natural gas-fired, it is subject only to the reporting and recordkeeping requirements of the NSPS. Specifically, 40 CFR 60.48c(a) requires the owner or operator to submit notification of the date of construction, anticipated startup, actual startup, design heat input capacity, identification of fuels to be combusted, and the annual capacity factor based on the fuels fired, and 40 CFR 60.48c(g) requires the source to record and maintain records of fuel usage. A copy of this rule is enclosed in the construction permit.

40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants (NESHAPs))

There are no NESHAP rules applicable to the operation of the continuous hot dip galvanize line.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons of NOx per year. Pursuant to this rule, the owner/operator of this source must annually submit an emission statement of the source. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emissions Limitations for Process Operations)

This rule establishes emission limitations for particulate matter (PM) from process operations. The process operations are in compliance with this rule because the potential controlled PM emissions (23.6 tons/yr) for the hot dip galvanize line are lower than the calculated allowable PM emissions (321 tons/yr). However, PM emissions from the source shall not exceed an overall threshold level of 100 tons per year to avoid PSD requirements (326 IAC 2-2 and 40 CFR 52.21). Therefore, emissions from the source shall be limited to 22.6 pounds of PM/PM10 per hour which is equivalent to 99 tons of PM/PM10 per year.

326 IAC 10 (NOx Emissions Limiations in Clark County)

According to the applicability requirements of 326 IAC 10-1-1(a)(3), "facilities requiring a permit under 326 IAC 2 that are constructed, modified, or reconstructed after the effective date of this rule and to which a new source performance standard (NSPS) does not apply shall comply with this rule or best available control technology (BACT), whichever is more stringent." This new source is not subject to the requirements of this rule because an NSPS rule (40 CFR Part 60, Subpart Dc) applies.

326 IAC 12 (New Source Performance Standards)

The annealing furnace of the hot dip galvanize line is subject to the New Source Performance Standard 40 CFR 60, Subpart Dc. The Indiana Air Pollution Control Board incorporates by reference 40 CFR 60 into 326 IAC 12.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) None of these listed air toxics will be emitted from this proposed construction.

(b) See attached spreadsheets for detailed air toxic calculations.

Conclusion

The construction of this continuous hot dip galvanize line will be subject to the conditions of the attached proposed **Construction Permit No. CP-019-9559-00089.**

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name:	GALVSTAR L.P.
Source Location:	5134 Loop Road, Jeffersonville, Indiana
County:	Clark
Construction Permit No.:	CP-019-9559-00089
SIC Code:	3312
Permit Reviewer:	Michele M. Williams

On April 9, 1998, the Office of Air Management (OAM) had a notice published in the *Clark County Evening News* in Jeffersonville, Indiana stating that GALVSTAR L.P., had applied for a construction permit to construct and operate a continuous hot dip galvanize line, with a maximum production capacity of 74 tons per hour. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

The following clarifications, additions and changes to the construction permit have been made by the OAM. It should be noted that the bold-face characters represent language that has been added to the proposed permit conditions and strikeout characters represent language that has been removed from the proposed permit conditions:

Item 1:

The OAM has added the following sentence to Section A.2 of the permit to clarify the reason some equipment is not included in Section D of the permit:

> **Items (a), (c), and (e) through (j) are not specifically regulated and therefore have not been included in Section D of this permit.**

Item 2:

The OAM incorrectly applied rule 326 IAC 6-3 (Process Operations) to the alkaline cleaning process. The correct PM rule cite is 326 IAC 6-1 (Nonattainment Area Particulate Limitations) because the source is located in Clark County and has the potential to emit 100 tons or more of particulate matter per year or actual emissions of 10 tons or more of particulate matter per year. The PSD applicability requirements for PM does not apply because the potential uncontrolled PM emissions (118 tons per year) are less than the PSD PM threshold level (250 tons per year). Operation Condition D.1.1 has been revised as follows to correctly reference nonattainment area particulate limitations (326 IAC 6-1) and has removed the reference to the PSD program:

D.1.1 Particulate Matter Emissions Limitation

Pursuant to 326 IAC **6-1 (Nonattainment Area Particulate Limitations),** ~~6-3 (Process Operations), the demister shall be in operation at all times when the alkaline cleaning process~~

~~is in operation. The allowable~~ particulate matter (PM) emissions from the alkaline cleaning process at the exhaust outlet of Stack S2 shall not exceed **0.03 grains per dry standard cubic foot (dscf). This is equivalent to 1.29 pounds of PM per hour at a maximum flow rate of 5,000 cubic feet per minute.** ~~0.289 pounds of PM per ton of steel processed to avoid PSD pursuant to 326 IAC 2-2.~~

Item 3:

An incorrect NSPS determination was made regarding the two-section annealing furnace. The permit and supporting documents stated that Subpart Dc applied to this unit.

Subpart Dc is not applicable to the two-section annealing furnace because this furnace is not defined as a steam generating facility. Therefore, proposed Construction Condition B.5 and proposed Operation Conditions D.2.1 and D.2.2 have been removed from the permit. The remaining conditions have been renumbered due to this deletion.

Item 4:

The NOx rule, 326 IAC 10, was incorrectly applied to the two-section annealing furnace. 326 IAC 10-1-1(a)(3) states that "[f]acilities requiring a permit under 326 IAC 2 that are constructed, modified, or reconstructed after the effective date of this rule and to which a new source performance standard (NSPS) does not apply shall comply with this rule or best available control technology (BACT), whichever is more stringent.

Because an NSPS does not apply to the two-section annealing furnace, BACT or 326 IAC 10-1, whichever is more stringent, shall apply. The EPA RACT/BACT/LAER Clearinghouse (RBLC) and related state permits were reviewed for control technology information. In accordance with the US EPA "Top-Down BACT Guidance", low-NOx burners (LNB) have been established as BACT for annealing furnaces. The two-section annealing furnace associated with GALVSTAR is equipped with low-NOx burners, and therefore meets BACT. The potential to emit from the annealing furnace utilizing the low-NOx burners is 33.2 tons per year. Pursuant to 326 IAC 10-1-4, the two-section annealing furnace is not subject to any of the emission limitations because it has a potential to emit less than 40 tons per year. Therefore, the utilization of low-NOx burners on the annealing furnace shall be required to satisfy the requirements of 326 IAC 10-1-1(a)(3). In addition, a stack test for NOx shall be required to demonstrate that 326 IAC 10-1-4 does not apply. The following operating permit conditions have been added to Section D.2 of the construction permit:

Emission Limitations and Standards:

D.2.1 Nitrogen Oxide Emission Limitations

Pursuant to 326 IAC 10-1, the two-section annealing furnace shall:

(a) utilize low-NOx burners to satisfy the requirements of 326 IAC 10-1-1(a)(3); and

(b) not exceed 8.9 pounds of NOx per hour to avoid the requirements of 326 IAC 10-1-4(b)(5).

Compliance Determination and Monitoring:

D.2.2 Performance Testing

Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance test on Stack S1 shall be performed for NOx within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. This test shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

The OAM received the following written comments from GALVSTAR on May 11, 1998. The OAM reviewed these comments and has responded below:

Comment 1:

The preparation of Emergency Reduction Plans is required for facilities that have the potential to emit emissions greater than 100 tons per year as specified at 326 IAC 1-5-2. GALVSTAR does not have a PTE of greater than 100 tons per year and therefore this requirement should not apply. Based on this, GALVSTAR requests that the requirement for preparation of Emergency Reduction Plans in Section C.6 be removed from the permit.

Response 1:

The OAM agrees, therefore proposed Operation Condition C.6 has been removed from the final permit. The remaining conditions have been renumbered due to this deletion.

Comment 2:

GALVSTAR requests that the monitoring requirements for section D.1.3(a) be modified to allow for monitoring and recording of the pressure drop at the demister to once per week from daily. The demister is not equipped with airflow monitoring equipment, and therefore, it will not be possible to monitor and record flow rates. The demister will not have the capability to measure flow rate, therefore, only pressure drop can be monitored. GALVSTAR will not know the actual pressure drop across the demister until the unit is in operation and is

concerned that arbitrarily requiring a specified acceptable pressure drop range for this unit will lead to unnecessary and unwarranted compliance problems in the future. GALVSTAR believes that it is premature to impose parametric compliance requirements into this permit until the development of 326 IAC 3-8 is complete. The first notice of public comment on this rule was published in the April 1, 1998, Indiana Register.

Response 2:

The static pressure drop across the mist eliminator provides an excellent indicator of the physical condition of the mist eliminator. Because the static pressure drop is a function of the gas flow rate through the mist eliminator, the OAM has removed the monitoring requirement for gas flow rate from Operation Condition D.1.3(a). The OAM shall continue to require measurement of pressure drop on a daily basis to demonstrate continuous compliance. With regard to the pressure drop range across the unit, the OAM has reevaluated the typical range across a mist eliminator (0.5 - 2.0 inches of water) and established this as the initial operating range until a range can be determined during the stack test. The OAM has revised Operation Condition D.1.3 as follows to incorporate the above changes:

D.1.3 Demister Operating Condition

The demister shall be operated at all times when the alkaline cleaning process in operation.

(a) The Permittee shall monitor and record the pressure drop ~~and flow rate~~ of the demister, at least once per day. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the demister shall be maintained within the range of ~~3 and 5~~ **0.5 and 2.0** inches of water. **This pressure drop range may be adjusted to incorporate the pressure drop determined from a compliant stack test.** The Preventive Maintenance Plan for the demister shall contain troubleshooting contingency and corrective actions for when the pressure drop and flow rate readings are outside of the normal range for any one reading.

(b) The instruments used for determining the pressure drop ~~and flow rate~~ shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

(c) The gauge employed to take the pressure drop across the demister or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm$ 2% of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.

(d) An inspection shall be performed each calendar quarter of the demister. Defective part(s) shall be replaced. A record shall be kept of the results of the inspection and the number of part(s) replaced.

(e) In the event that demister failure has been observed, the affected process will be shut down immediately until the failed unit has been replaced.

Comment 3:

The requirement to conduct visible emission notations of all exhaust to the atmosphere once per working shift is excessive and unnecessary. GALVSTAR believes that the requirement to take visible emission notations each shift be dropped completely on the basis that this emission source has the potential to emit only 4.28 lbs of PM/hr and is an inherently very clean operation with no opacity issues other than water vapor. As previously noted, GALVSTAR believes that it is premature to impose these requirements into this permit until the development of 326 IAC 3-8 is complete.

In addition, the PTE of this source is below the 10 lb/hr that has been proposed by IDEM as a CAM threshold. Therefore, GALVSTAR requests that Section D.1.4 requiring visible emission notations be deleted.

Response 3:

Operation Condition D.1.4 was originally required by the permit because the unit emits particulate matter and was subject to a NSPS. However, upon further analysis by the OAM, the NSPS does not apply to this unit. Therefore, OAM agrees and proposed Operation Condition D.1.4 has been removed from the final permit. The remaining conditions have been renumbered due to this deletion.

Comment 4:

GALVSTAR notes that there is an incorrect citing in Condition D.1.5(a) (now Condition D.1.4(a)). The correct reference should be Condition D.1.3(a), not D.1.2(a) as indicated.

Response 4:

The OAM agrees and has made this revision to the final permit as follows:

D.1.4 Recordkeeping Requirement

The Permittee shall maintain a log of information necessary to demonstrate compliance with Operation Condition D.1.1 as follows:

(a) The Permittee shall maintain ~~weekly~~ **daily** logs of the parameters established in Operation Condition D.1.~~2~~ **3**(a), semi-annual logs of the parameters established in Operation Condition D.1.~~2~~ **3**(b) and quarterly logs of the parameters established in Operation Condition D.1.~~2~~ **3**(d) shall be maintained for a minimum of 36 months. These records shall be kept at the source location and available within one (1) hour upon verbal request of an IDEM, OAM representative.

Mail to: Permit Administration & Development Section
Office Of Air Management
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

GALVSTAR L.P.
400 Three Springs Drive
Weirton, WV 26062-4989

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make
these representations on behalf of _____.
(Company Name)

4. I hereby certify that GALVSTAR L.P. located at 5134 Loop Road Jeffersonville, Indiana, 47130, has constructed the continuous hot dip galvanize line in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on March 12, 1998 and as permitted pursuant to **Construction Permit No. CP-019-9559, Plant ID No. 019-00089** issued on _____.

5. I hereby certify that GALVSTAR L.P. is now subject to the Title V program and will submit a Title V (or FESOP) operating permit application within twelve (12) months from the postmarked submission date of this Affidavit of Construction.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 19 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)