



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
[www.IN.gov/idem](http://www.IN.gov/idem)

TO: Interested Parties / Applicant

DATE: September 19, 2005

RE: Accucast Technology, LLC / 141-21187-00010

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

**Notice of Decision: Approval - Effective Immediately**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER-MOD.dot 1/10/05



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

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September 19, 2005

Sal Detraglia  
Accucast Technology, L.L.C.  
220 W. Eckman Street  
South Bend, Indiana 46614

Re: **T 141-21187-00010**  
Minor Source Modification to:  
Part 70 Operating Permit No.: **T 141-6210-00010**

Dear Mr. Detraglia:

Accucast Technology, L.L.C. was issued Part 70 Operating Permit T 141-6210-00010 on February 18, 1999 for a gray and ductile iron foundry. An application to modify the source was received on April 18, 2005. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval 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.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval 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.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

The source may begin construction and operation when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Mark L. Kramer, c/o OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, at 631-691-3395, ext. 12 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,  
Original signed by

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments: MSM with TSD  
MLK/MES

cc: File - St. Joseph County  
St. Joseph County Health Department  
Northern Regional Office  
Air Compliance Section Inspector - Rick Reynolds  
Compliance Branch  
Administrative and Development Section  
Technical Support and Modeling - Michele Boner



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## PART 70 OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Accucast Technology, L.L.C.  
220 W. Eckman Street  
South Bend, Indiana 46614**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 141-6210-00010	
Original Signed by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: February 18, 1999  Expiration Date: February 18, 2004
First Minor Source No.: 141-21187-00010	Conditions Affected: A.1, A.2 and B.28 Section Added: D.15
Issued by: Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: September 19, 2005

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

**A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]**

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The Permittee owns and operates a gray and ductile iron foundry

Responsible Official:	President
Source Address:	220 W. Eckman Street, South Bend, Indiana 46614
Mailing Address:	220 W. Eckman Street, South Bend, Indiana 46614
SIC Code:	3321
County Location:	St. Joseph
Source Location Status:	Nonattainment for 8-hour ozone attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules, Minor Source under Emission Offset 1 of 28 Source Categories

**A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]**

This stationary source consists of the following emission units and pollution control devices:

- (18) One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

**SECTION B GENERAL CONDITIONS**

**B.28 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]**

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

**SECTION D.15 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (18) One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

**(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.15.1 Nonattainment Area Particulate Limitations [326 IAC 6.5-1-2]**

Pursuant to 326 IAC 6.5-1-2(e)(2) (formerly 326 IAC 6-1-2(e)(2)), particulate matter (PM) emissions from the metal oxide recovery system, identified as RCL01, shall be limited to 0.07 grains per dry standard cubic foot of exhaust air.

**D.15.2 PM and PM<sub>10</sub> Limitations [326 IAC 2-2]**

- (a) The PM emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 5.70 pounds per hour, and
- (b) The PM<sub>10</sub> emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 3.42 pounds per hour.
- (c) Compliance with these PM and PM<sub>10</sub> limits renders the requirements of 326 IAC 2-2 not applicable.

**D.15.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the metal oxide recovery system and its control device.

## **Compliance Determination Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

### **D.15.4 Particulate Control**

In order to comply with Conditions D.15.1 and D.15.2, the baghouse for particulate control shall be in operation and control emissions from the metal oxide recovery system at all times that the metal oxide recovery system is in operation.

### **D.15.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

Within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start up in order to demonstrate compliance with Conditions D.15.1 and D.15.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the metal oxide recovery system, identified as RCL01, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

## **Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

### **D.15.6 Visible Emissions Notations**

- (a) Visible emissions notations of the metal oxide recovery system stack exhaust FS01 shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

### **D.15.7 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouse controlling the metal oxide recovery system, at least once per shift when the metal oxide recovery system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.15.8 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the metal oxide

recovery system. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.15.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### D.15.10 Record Keeping Requirements

- (a) To document compliance with Condition D.15.6, the Permittee shall maintain records of visible emission notations of the metal oxide recovery system baghouse stack exhaust FS01 once per shift.
- (b) To document compliance with Condition D.15.7, the Permittee shall maintain records once per shift of the total static pressure drop.
- (c) To document compliance with Condition D.15.8, the Permittee shall maintain records of the results of the inspections required under Condition D.15.8.
- (d) To document compliance with Condition D.15.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Minor Source Modification and Minor Permit Modification

#### Source Background and Description

<b>Source Name:</b>	<b>Accucast Technology, L.L.C.</b>
<b>Source Location:</b>	<b>220 W. Eckman Street, South Bend, Indiana 46614</b>
<b>County:</b>	<b>St. Joseph</b>
<b>SIC Code:</b>	<b>3321</b>
<b>Operation Permit No.:</b>	<b>T 141-6210-00010</b>
<b>Operation Permit Issuance Date:</b>	<b>February 18, 1999</b>
<b>Minor Source Modification No.:</b>	<b>141-21187-00010</b>
<b>Minor Permit Modification No.:</b>	<b>141-21443-00010</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

The Office of Air Quality (OAQ) has reviewed a modification application from Accucast Technology, L.L.C., formerly South Bend Acquisition Corporation, relating to the construction and operation of the following emission unit and pollution control device:

One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

#### History

On April 18, 2005 Accucast Technology, L.L.C. submitted an application to the OAQ requesting to add a metal oxide recovery system to their existing plant. The metal oxide recovery system will be a pilot program to determine the feasibility of recovering zinc oxide from steel slag. The metal oxide recovery system will consist of a new, specially modified, electric induction furnace equipped with a new baghouse. The new baghouse will be used to collect oxidized zinc which will be recovered from the processing of the BOF/blast furnace briquettes.

Accucast Technology, L.L.C. (formerly South Bend Acquisition Corporation) was issued a Part 70 Operating permit on February 18, 1999. The Part 70 Operating Permit Renewal application 141-21129-00010 was received by IDEM on April 18, 2005. The first Significant Permit Modification (141-11175-00010) was issued on February 22, 2000, the first Administrative Amendment (141-12734-00010) was issued on November 14, 2000 and the first reopening (141-13477-00010) was issued on January 24, 2002.

#### Source Definition

The Sibley Foundry and Accucast Technology (formerly South Bend Acquisition Corporation) are two plants that are located two miles apart and have the same SIC code. Sibley owns both sources but only operates Sibley Machine. They have leased Sibley Foundry to Accucast Technology (formerly South Bend Acquisition Corporation). The lease gives up almost all control over the foundry. So in this case, common ownership did not necessarily equal common control.

OAQ had determined in the Technical Support Document for the Part 70 Operating Permit (141-6210-00010, issued February 18, 1999) that these two plants are two separate sources because they are not under common control.

In addition, the steel mill that will supply Accucast Technology with the BOF/blast furnace briquettes to be processed is a separate source from the Accucast Technology source. The two (2) plants have no contractual relationship, are not under common control, there are no common employees at the plants and the plants are separated by more than 60 miles.

### **Air Pollution Control Justification as an Integral Part of the Process**

Accucast Technology has submitted the following justification such that the baghouse be considered as an integral part of the process:

The baghouse control device is required to capture all of the product from the proposed recovery system. Therefore, the new baghouse will serve a primary purpose other than pollution control. The system could not operate as a recovery system without the baghouse.

IDEM, OAQ has evaluated the justification and agrees that the baghouse will be considered as an integral part of the process. Therefore, the permitting level will be determined using the potential to emit after the baghouse control. Operating conditions in the proposed permit will specify that this baghouse shall operate at all times when the process is in operation.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Stack Summary**

<b>Stack ID</b>	<b>Operation</b>	<b>Height (feet)</b>	<b>Diameter (feet)</b>	<b>Flow Rate (acfm)</b>	<b>Temperature (EF)</b>
FS01	Metal Oxide Recovery	60.0	5.08	44,000	250

### **Recommendation**

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on April 18, 2005. Additional information was received on June 9 and August 18, 2005.

### **Emission Calculations**

See page 1 of 1 of Appendix A of this document for detailed emissions calculations.

### **Potential To Emit of Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.

This table reflects the PTE after controls for this modification since the baghouse has been determined by OAQ to be integral to the process. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	23.0
PM <sub>10</sub>	7.85
SO <sub>2</sub>	-
VOC	-
CO	-
NO <sub>x</sub>	-

There are no HAPs emissions associated with this proposed modification.

**Justification for Modification**

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(3), since the potential to emit PM and PM<sub>10</sub> from the modification is greater than or equal to five (5) tons per year and less than twenty-five (25) tons per year.

The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Minor Permit Modification (MPM 141-21443-00010) in accordance with 326 IAC 2-7-12(b)(1). The Minor Permit Modification will give the source approval to operate the proposed emission unit.

**County Attainment Status**

The source is located in St. Joseph County.

Pollutant	Status
PM <sub>2.5</sub>	attainment
PM <sub>10</sub>	attainment
SO <sub>2</sub>	maintenance
NO <sub>2</sub>	attainment
1-Hour Ozone	attainment
8-Hour Ozone	basic nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub>

emissions were reviewed pursuant to the requirements of 326 IAC 2-3, Emission Offset. See the State Rule Applicability - Entire Source section of this document.

- (b) St. Joseph County has been classified as unclassifiable or attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2, for PM<sub>2.5</sub> emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability - Entire Source Section of this document.
- (c) St. Joseph County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section of this document.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	320.6
PM <sub>10</sub>	225.3
SO <sub>2</sub>	2.53
VOC	62.9
CO	0.00
NO <sub>x</sub>	26.5

- (a) This existing source is a major stationary PSD source because an attainment regulated pollutant is emitted at a rate of one hundred (100) tons per year or more, and it is one of the twenty-eight (28) listed source categories.
- (b) This existing source is a minor stationary source for emission offset because the nonattainment regulated pollutants (NO<sub>x</sub> and VOC) are each emitted at a rate of less than one hundred (100) tons per year.
- (c) These emissions are based the Technical Support Document for the Part 70 Operating Permit, T-141-6210-00010 issued on February 18, 1999.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

<b>Pollutant</b>	<b>PM</b> (tons/yr)	<b>PM<sub>10</sub></b> (tons/yr)	<b>SO<sub>2</sub></b> (tons/yr)	<b>VOC</b> (tons/yr)	<b>CO</b> (tons/yr)	<b>NO<sub>x</sub></b> (tons/yr)
Proposed Modification Metal Oxide Recovery System (RCL01)	23.0	7.85				
PSD Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

**Federal Rule Applicability**

- (a) The federal Compliance Assurance Monitoring rule, 40 CFR Part 64, applies to certain applications for signification permit modifications received after April 20, 1998 as well as the Title V permit applications received or determined to be complete after April 20, 1998 and Title V renewal applications. Since, this modification is a minor permit modification, the requirements of the federal CAM rule do not apply to the proposed metal oxide recovery system, identified as RCL01.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this proposed modification.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Iron and Steel Foundries (40 CFR Part 63.7700, Subpart EEEEE) are not included in the permit for this proposed modification since the source, is minor for HAPs and will continue to be a minor source of HAPs even after this proposed modification.

**State Rule Applicability - Entire Source**

326 IAC 2-3 (Emission Offset)

The potential VOC emissions are less than one-hundred (100) tons per year. Therefore, this source is a minor source pursuant to 326 IAC 2-3, Emission Offset.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The potential PM and PM<sub>10</sub> emissions are greater than one hundred (100) tons per year. Therefore, this source, which is one of the twenty-eight (28) listed source categories, is a major source pursuant to 326 IAC 2-2, PSD. This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order for this proposed modification to be a minor modification pursuant to 326 IAC 2-7-10.5 and not be subject to the requirements of 326 IAC 2-2, the following emission limitation will be incorporated:

- (a) The PM emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 5.70 pounds per hour, equivalent to less than twenty-five (25) tons per year, and

- (b) The PM<sub>10</sub> emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 3.42 pounds per hour, equivalent to less than fifteen (15) tons per year.

#### 326 IAC 6.5 (formerly 326 IAC 6-1) (County Specific Particulate Matter Limitations)

This source, which is not specifically listed in 326 IAC 6.5-7 (formerly 326 IAC 6-1-18) (St. Joseph County), has a potential to emit more than one hundred (100) tons per year of particulate. Therefore, the requirements of 326 IAC 6.5 are applicable to this source. Pursuant to 326 IAC 6.5-1-2(e)(2) (formerly 326 IAC 6-1-2(e)(2)), the particulate from the metal oxide recovery system shall not exceed sixteen-hundredths (0.16) grams per dry standard cubic meter (seven-hundredths (0.07) grains per dry standard cubic foot).

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The one (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01, has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the metal oxide recovery system stack exhaust FS01 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously anormal@ means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
- (b) The Permittee shall record the total static pressure drop across the baghouse controlling the metal oxide recovery system, at least once per shift when the metal oxide recovery system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the

range of 1.0 to 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

- (c) An inspection shall be performed each calendar quarter of all bags controlling metal oxide recovery system. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.
  - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the baghouse must operate properly to ensure compliance with 326 IAC 6-1, 326 IAC 2-2 and 326 IAC 2-7 (Part 70).

### Testing Requirements

Stack testing is proposed to verify compliance with the PM, PM<sub>10</sub> and grain loading limits as well as assure that this modification is in fact a minor modification and not subject to the requirements of 326 IAC 2-2. The emissions factors were taken from an "identical" initial pilot program using identical briquettes, but the stack test was not submitted to IDEM, OAQ, nor was it approved by IDEM, OAQ.

Stack testing is proposed within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start up.

### Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in bold):

### Change 1:

The letterhead of the permit has been revised to indicate the new Governor and the new Commissioner of IDEM. The P.O. Box in the address of the OAQ has been deleted throughout the permit and the ZIP code has been revised as follows:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, ~~P.O. Box 6015~~  
Indianapolis, Indiana 46204 ~~6-6015~~

### Change 2:

In addition to the proposed construction and operation of the metal oxide recovery system, the source requested that the company name be changed as well as the responsible official. IDEM, OAQ prefers the title of the person rather than the name and title. Therefore, South Bend Acquisition Corporation has been changed to Accucast Technology, L.L.C. throughout the permit. Condition A.1 has been revised.

All references to the St. Joseph County Health Department as a local agency have been deleted from the permit as the St. Joseph County Health Department is no longer a local agency.

St. Joseph County has been classified as unclassifiable or attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability - Entire Source section of this document.

Condition A.1 has been revised as follows:

#### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a stationary gray and ductile iron foundry

Responsible Official: ~~Jeffrey R. Hipple, Vice President~~  
Source Address: 220 W. Eckman Street, South Bend, Indiana ~~46604~~ **46614**  
Mailing Address: 220 W. Eckman Street, South Bend, Indiana ~~46604~~ **46614**  
SIC Code: 3321  
County Location: St. Joseph  
County Status: ~~Maintenance~~ **Nonattainment for 8-hour ozone**  
attainment for all other criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under PSD Rules, **Minor Source under Emission Offset**  
**Rules**  
**1 of 28 Source Categories**

### Change 3:

Indiana was required to incorporate credible evidence provisions into state rules consistent with the SIP call published by U.S. EPA in 1997 (62 FR 8314). Indiana has incorporated the credible evidence provision in 326 IAC 1-1-6. This rule is effective March 16, 2005; therefore, Condition B.28 reflecting this rule will be incorporated into the proposed permit as follows:

**B.28 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]**

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

**Change 4:**

Condition A.2 has been revised to add the proposed metal oxide recovery system, Section D.15 has been added, and the insignificant activities section D.15 has been re-numbered to D.16 as follows:

**A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]**

This stationary source consists of the following emission units and pollution control devices:

- (18) One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

**SECTION D.15**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

- (18) One (1) metal oxide recovery system, identified as RCL01, consisting of one (1) electric channel induction furnace, identified as Unit 17, and an integral baghouse, identified as RCL01, exhausting through stack FS01. This metal oxide recovery system was installed in 2005, and has a capacity of 2.00 tons of BOF/blast furnace briquettes per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.15.1 Nonattainment Area Particulate Limitations [326 IAC 6.5-1-2]**

Pursuant to 326 IAC 6.5-1-2(e)(2) (formerly 326 IAC 6-1-2(e)(2)), particulate matter (PM) emissions from the metal oxide recovery system, identified as RCL01, shall be limited to 0.07 grains per dry standard cubic foot of exhaust air.

**D.15.2 PM and PM<sub>10</sub> Limitations [326 IAC 2-2]**

- (a) The PM emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 5.70 pounds per hour, and
- (b) The PM<sub>10</sub> emissions from the metal oxide recovery system, identified as RCL01, shall not exceed 3.42 pounds per hour.
- (c) Compliance with these PM and PM<sub>10</sub> limits renders the requirements of 326 IAC 2-2 not applicable.

#### **D.15.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

**A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the metal oxide recovery system and its control device.**

#### **Compliance Determination Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]**

#### **D.15.4 Particulate Control**

**In order to comply with Conditions D.15.1 and D.15.2, the baghouse for particulate control shall be in operation and control emissions from the metal oxide recovery system at all times that the metal oxide recovery system is in operation.**

#### **D.15.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

**Within sixty (60) days after achieving maximum production rate, but no later than one hundred eighty (180) days after initial start up in order to demonstrate compliance with Conditions D.15.1 and D.15.2, the Permittee shall perform PM and PM<sub>10</sub> testing of the metal oxide recovery system, identified as RCL01, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.**

#### **Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

#### **D.15.6 Visible Emissions Notations**

- (a) Visible emissions notations of the metal oxide recovery system baghouse stack exhaust FS01 shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.**

#### **D.15.7 Parametric Monitoring**

**The Permittee shall record the total static pressure drop across the baghouse controlling the metal oxide recovery system, at least once per shift when the metal oxide recovery system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance**

**Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.**

**The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

#### **D.15.8 Baghouse Inspections**

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**An inspection shall be performed each calendar quarter of all bags controlling the metal oxide recovery system. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.**

#### **D.15.9 Broken or Failed Bag Detection**

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**In the event that bag failure has been observed:**

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.15.10 Record Keeping Requirements**

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- (a) To document compliance with Condition D.15.6, the Permittee shall maintain records of visible emission notations of the metal oxide recovery system baghouse stack exhaust FS01 once per shift.**
- (b) To document compliance with Condition D.15.7, the Permittee shall maintain records once per shift of the total static pressure drop.**

- (c) To document compliance with Condition D.15.8, the Permittee shall maintain records of the results of the inspections required under Condition D.15.8.**
- (d) To document compliance with Condition D.15.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.**
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

### **Conclusion**

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 141-21187-00010 and Minor Permit Modification No. 141-21443-00010.

**Appendix A: Emission Calculations  
Zinc Oxide Recovery System**

**Company Name: Accucast Technology, L.L.C.  
Address City IN Zip: 220 W. Eckman Street, South Bend, Indiana 46614  
Part 70 Minor Source Modification: MSM 141-21187  
Plt ID: 141-00010  
Reviewer: Mark L. Kramer  
Application Date: April 18, 2005**

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
Baghouse							
RCL01	98.0%	0.0139293	44000	N/A	N/A	5.2533	23.010

**Methodology**

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

The PM emissions comply with the 0.07 grains/dscf requirement of 326 IAC 6-1-2(g).

**PM and PM-10 Calculations**

Material Feed Rate	lbs/hr	4000
Zinc Percentage	%	4.00%
Lbs zinc per hour	lbs/hr	160
Zinc Percentage of PM	%	60.00%
Total PM	lbs/hr	266.7
Percent PM100	%	98.50%
Percent PM10	%	33.60%
Control Efficiency		98.00%
PTE PM	lbs/hr	5.25
PTE PM	tons/yr	<b>23.0</b>
PTE PM10	lbs/yr	1.79
PTE PM10	tons/yr	<b>7.85</b>

Baghouse is integral to process therefore emissions are only calculated after control