

**Iowa Department of Natural Resources
Environmental Protection Commission**

ITEM

13

DECISION

TOPIC

Referral to the Attorney General

The Director requests the referral of the following to the Attorney General for appropriate legal action. Litigation reports have been provided to the commissioners and are confidential pursuant to Iowa Code section 22.7(4). The parties have been informed of this action and may appear to discuss this matter. If the Commission needs to discuss strategy with counsel on any matter where the disclosure of matters discussed would be likely to prejudice or disadvantage its position in litigation, the Commission may go into closed session pursuant to Iowa Code section 21.5(1)(c).

- Grain Processing Corporation (Muscatine) – Air Quality / Wastewater

Edmund J. Tormey, Chief
Legal Services Bureau

March 30, 2011

LITIGATION REPORT for GRAIN PROCESSING CORPORATION
April 2011 EPC Meeting

LITIGATION REPORT

Prepared by: Kelli Book
Date: March 31, 2011

I. Summary

The DNR seeks referral of Grain Processing Corporation (GPC) to the Attorney General's Office for appropriate enforcement action, due to air quality and wastewater violations at its facility in Muscatine, Iowa. This referral includes the following violations: failure to obtain Prevention of Significant Deterioration (PSD) permits, failure to comply with the emissions limits of air quality construction permits, failure to comply with the notification, reporting, and emission reduction requirements associated with the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing, 40 Code of Federal Register (CFR) Part 63, Subpart FFFF, also known as the MON, and failure to obtain a construction permit prior to the construction of a 1.9 million gallon anaerobic settler of GPC's wastewater treatment system.

II. Alleged Violator

Grain Processing Corporation
1600 Oregon Street
Muscatine, Iowa 52761

III. Description of Facility

GPC owns a corn processing facility located in Muscatine, Iowa. GPC produces a variety of corn derivative products. Products include maltodextrins; corn syrup solids and starches for food, pharmaceutical and personal care markets; ethyl alcohol for beverage, industrial use, and fuel; starches for paper, corrugated box, textile, and wallboard industries; corn oil; and animal nutrition ingredients.

GPC has numerous air emission sources at its facility. GPC is considered to be a major source of air pollutants under both the PSD and the Title V Operating Permit programs. GPC has the potential to emit more than 250 tons of particulate matter (PM), particulate matter equal to or less than 10 microns in aerodynamic diameter (PM₁₀), sulfur dioxide (SO₂), nitrogen oxide (NO₂), carbon monoxide (CO), and volatile organic compounds (VOC). GPC also emits more than 25 tons of hazardous air pollutants (HAPs) and more than 10 tons of a single HAP.

GPC also holds a National Pollutant Discharge Elimination System (NPDES) permit. There are six distinct outfalls and one theoretical outfall. The facility is allowed a net addition for the pollutants biological oxygen demand (BOD) and

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total suspended solids (TSS) for all of the discharges through the six distinct outfalls on the water drawn from the Mississippi River and returned to the Mississippi River. The theoretical outfall is the reporting mechanism for the total amount of BOD and TSS from the six distinct outfalls minus the BOD and TSS present in the river water. Wastewater from the facility is treated by an activated sludge process and anaerobic digesters.

IV. Alleged Violations (including facts and applicable law)

Air Quality

The air quality violations include failure to obtain a PSD permit, failure to comply with the emission limits of a construction permit, and failure to comply with the emissions reduction, notification, and reporting requirements associated with the MON. As set out below, GPC requested and obtained from DNR permit limits for the #4 Gluten Dryer below the thresholds that would subject GPC to PSD review (i.e. obtained “synthetic minor limits”). However, GPC failed to meet these limits; thus triggering PSD review for the #4 Gluten Dryer. GPC’s failure to meet these limits is a serious matter, resulting in avoided and delayed costs in complying with the Clean Air Act permitting requirements.

Construction Permits (PSD and Emission Limit Violations)

A. FACTS

In 1991, DNR issued a construction permit for the #4 Gluten Dryer (Permit #91-A-067). The construction permit included a PM and PM₁₀ emission limits, creating a synthetic minor limit, allowing GPC to avoid PSD review. The goals of the PSD regulation is to: 1) ensure that economic development growth will occur in harmony with the preservation of existing clean air resources to prevent the development of any new nonattainment problems; 2) to protect the public health and welfare from any adverse effect which might occur even at air pollution levels better than the national ambient air quality standards (NAAQS); and 3) to preserve, protect, and enhance the air quality in areas of special natural recreational, scenic, or historic value, such as national parks and wilderness areas. In 1992, the facility conducted a stack test indicating compliance with the emission limits.

In 2006, DNR issued a construction permit modification for the #4 Gluten Dryer increasing the PM/ PM₁₀ emission limit (Permit #91-A-067-S1). The PM/PM₁₀ emission limits were increased to 5.31 lbs/hr. These limits were intended to continue the synthetic minor status; thus again allowing GPC to avoid PSD review. In 2007, GPC conducted a stack test demonstrating compliance with the emission limits.

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In March 2009, DNR issued a construction permit modification for the #4 Gluten Dryer (Permit #91-A-067-S2). The modification allowed GPC to use biogas as a fuel. Because of the change in the fuel and its potential impact on emissions, the permit required GPC to perform another stack test on the #4 Gluten Dryer. This permit maintained the synthetic minor limit of 5.31 lbs/hr of PM/PM₁₀ to avoid PSD review. Additionally, the March 2009 modification included emission limits for sulfur dioxide (SO₂). The SO₂ emission limit was established at 4.5 lbs/hr. The SO₂ emission limit served two purposes: to allow GPC to avoid State Implementation Plan (SIP) maintenance plan modeling and to avoid PSD review.

In June 2010, GPC conducted a required stack test on the #4 Gluten Dryer for PM/PM₁₀ and SO₂. It should be noted that GPC did not complete all three runs of the required testing. GPC stopped after the first run. However, the one run completed demonstrated that the emission limits were not being met. The results indicated that the PM/PM₁₀ emission limits and the SO₂ emission limit were being exceeded. The results of the first stack test in June 2010 indicated the PM/PM₁₀ emissions at 16.07 lbs/hr (5.31 lbs/hr permit limit) and the SO₂ emissions at 30.65 lbs/hr (4.5 lbs/hr permit limit). On August 27, 2010, DNR issued a Notice of Violation letter for emission limit violations as a result of the June 2010 stack tests.

After communications between DNR and GPC, GPC was allowed to adjust the control equipment to improve its control efficiency and retest in August 2010. The results continued to indicate that the PM/PM₁₀ emission limits and the SO₂ emission limit were being exceeded. The results of the second stack test in August 2010 indicated the PM/PM₁₀ emissions at 17.77 lbs/hr (5.31 lbs/hr permit limit) and the SO₂ emissions at 9.73 lbs/hr (4.5 lbs/hr permit limit). On November 15, 2010, DNR issued a Notice of Violation letter for the failed stack tests and for failing to apply for PSD permits.

In December 2010, GPC submitted a letter to the DNR indicating that it would be retesting the #4 Gluten Dryer for PM/PM₁₀ in January 2011. The letter also stated that GPC would submit permit modifications for the SO₂ exceedance when it could determine how to meet the limit.

In February 2011, GPC submitted a letter to the DNR. The letter stated that GPC had determined that the SO₂ emission limit exceedance could be remedied with improvements to the existing scrubber and the addition of caustic to the scrubber water to increase SO₂ removal; however, according to GPC, the current economic and operating issues prevented GPC from taking those steps at this time. Therefore, GPC stated it had stopped the use of biogas until the biogas scrubber is completed later in the year. GPC stated when the biogas scrubber is completed that it will conduct a stack test to demonstrate compliance with the SO₂ emission

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limit in the permit.¹ The letter also addressed the PM/PM₁₀ emission limit exceedance. GPC is currently reviewing the control systems and plans engineering testing for the week of March 21, 2011.² GPC stated after successful engineering testing it would contact DNR to schedule a stack test for PM/PM₁₀.

In March 2011, DNR sent a letter to GPC in response to the February 2011 letter. The DNR stated that it received the letter from GPC and reminded the facility that it remains out of compliance until the facility tests back in compliance.

B. Applicable Law

567 Iowa Administrative Code (IAC) section 22.3(3) states as follows:

A permit may be issued subject to conditions which shall be specified in writing. Such conditions may include but are not limited to emission limits, operating conditions, fuel specifications, compliance testing, continuous monitoring, and excess emission reporting.

Air quality construction permits contain operating and emission limits. The construction permit can also require testing to demonstrate compliance with the limits established in the permit. Condition 10 of the construction permit for the #4 Gluten Dryer included a PM/PM₁₀ emission limit of 5.31 lb/hr and an SO₂ emission limit of 4.50 lb/hr. A stack test conducted in June 2010 indicated PM/PM₁₀ and SO₂ emissions in excess of the permitted limits. A stack test conducted in August 2010 continued to indicate PM/PM₁₀ and SO₂ emissions in excess of the permitted limits. The above facts demonstrate violations of this provision.

567 IAC 33.3(2)"b"³ states as follows:

No new major stationary source or major modification to which the requirements of subrule 33.3(10) through paragraph 33.3(18)"e" [PSD permitting requirements] apply shall begin actual construction without a permit that states that the major stationary or major modification will meet those requirements.

¹ It should be noted that GPC does not have a permit for a new biogas scrubber and has not submitted a permit application for the construction of a new biogas scrubber. GPC has not provided a timeline as to when an application would be submitted.

² This indicates to the DNR that the change of the fuel may not have been the cause of the increased PM/PM₁₀ emissions in the stack tests conducted in 2010.

³ PSD applicability is based on the time the emission limit is set. At the time the emission limits were initially set in the GPC permits, DNR had not adopted its own rules for PSD, but rather had adopted the federal rules by reference. This litigation report includes the regulations in place at this time, the definitions in the DNR rules and the federal rules are the same.

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567 IAC 33.3(1) defines a “major stationary source,” for purposes of the PSD program, as any stationary source of air contaminants that emits, or has the potential to emit greater than 250 tons per year or more of a regulated New Source Review (NSR) pollutant.

567 IAC 33.3(1) defines a “major modification” as any physical change in or change in the method of operation of a major stationary source which would result in a significant emissions increase of a regulated NSR pollutant and a significant net emissions increase of that pollutant from a major stationary source.

567 IAC 33.3(1) defines “significant” in reference to net emissions increase for PM at 25 tons per year (tpy), PM₁₀ at 15 tpy, and SO₂ at 40 tpy.

567 IAC 33.3(18)”c” states an owner or operator who constructs or operates a source or modification subject to the PSD regulations without applying for and receiving DNR approval shall be subject to an appropriate enforcement action.

Based on the stack testing completed in August 2010, PM/PM₁₀ emissions exceeded the PSD synthetic minor limit by 12.46 pounds per hour or assuming continuous operation approximately 54.6 tons per year. The PSD synthetic minor limit for PM/PM₁₀ was established at the significance level for PSD of 25 tons per year of PM and 15 tons per year of PM₁₀ and accounting for any net emissions decreases available at the time the permit was issued. Any exceedance of the established limits is over the PSD significance level. In this case the exceedance of the significance level is by as much as 54.6 tons per year. The stack test completed in June 2010, where only one run was completed, resulted in GPC exceeding the PM/PM₁₀ PSD synthetic minor limit by 10.76 pounds per year or as much as 47.1 tons per year. Based on the results of either stack test, the modification in 2009 should have been considered as a major modification and the #4 Gluten Dryer should have gone through PSD review for both PM and PM₁₀. The above facts indicate a violation of the PSD permit requirement.

It should be noted that there may also be an SO₂ PSD violation. The emission limit was set more stringently than required to simply avoid PSD review. Accordingly, a PSD violation would depend on how long GPC combusted biogas in the #4 Gluten Dryer. If this matter is referred this potential violation will be reviewed by the Attorney General’s Office after discovery is completed. However, there is still a violation of the SO₂ emission limit that was established in the permit to protect public health and welfare.

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MON Violations

A. Facts

40 CFR 63, Subpart FFFF for Miscellaneous Organic Chemical Manufacturing (MON) regulates hazardous air pollutants emitted from miscellaneous organic chemical manufacturing process units at major sources.⁴ The fuel and industrial ethanol production process at GPC subjects the facility to the MON requirements. GPC is considered an existing source for purposes of MON applicability because it began fuel and industrial ethanol production prior to November 10, 2003. The compliance date for existing facilities was May 10, 2008.

Based on information provided by GPC, DNR had previously determined GPC was not subject to the MON. In July 2006, as part of Project 06-168, Peter Zayudis, DNR air quality construction permit engineer, spoke with John Sparks, from GPC regarding MON applicability. Mr. Sparks stated that the mash fermenter project was not subject to the MON because it produced only beverage alcohol. Mr. Sparks stated that he understood that industrial alcohol would be subject to the MON. Based on this information Mr. Zayudis stated in the engineering evaluation for Project 06-168 that the project was not subject to the MON because "GPC produces beverage grade alcohol only," but that "industrial grade ethanol producers are subject to NESHAP Subpart FFFF [MON] if the facility is a major source of HAPs." GPC has since told DNR that these fermenters are used to produce all of the ethyl alcohol at the facility including beverage, industrial, and fuel grade ethanol (from conversation in February 2010).

The MON requires the submittal of an initial notification, notification of compliance status report, and semi-annual compliance reports. On March 9, 2004, the initial notification indicating that a facility was subject to the MON was due. GPC failed to submit the initial notification. On October 7, 2008, the affected facilities were required to submit a notification of compliance status, which includes a listing of equipment subject to MON requirements, emission calculations, and information on how the facility was demonstrating compliance with this subpart. GPC failed to submit the notification of compliance status. On March 31, 2009, the first compliance report was due. GPC failed to submit the first compliance report. This report required information on malfunctions causing excess emissions and deviations from any emission limit, operating limit, or work practice. On September 30, 2009 and March 31, 2010, semi-annual reports were due. GPC failed to submit these semi-annual reports.

⁴ 567 IAC 23.1(4)"cf" adopts by reference 40 CFR 63, Subpart FFFF for Miscellaneous Organic Chemical Manufacturing.

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On February 2, 2010, GPC contacted DNR to discuss if GPC was subject to the MON. After reviewing the MON applicability criteria and learning that in addition to beverage alcohol GPC produces fuel and industrial ethanol, DNR determined that GPC was subject to the MON. On February 3, 2010, Diane Brockshus, DNR Air Quality environmental specialist, contact Mick Durham with GPC and informed him that GPC was subject to the MON. Ms. Brockshus asked that he send in a MON initial notification and a compliance plan. Ms. Brockshus informed Mr. Durham that a Notice of Violation letter would likely be issued.

On March 17, 2010, DNR issued a Notice of Violation letter to GPC for failing to submit the initial MON notification, the notification of compliance status, the first compliance report, and a semi-annual report.

On March 31, 2010, GPC responded to the Notice of Violation letter. The letter provided an initial notification for the MON. The letter stated that the required Leak Detection and Repair (LDAR) program would be implemented by July 2010.

On August 11, 2010, GPC sent the MON notification of compliance status report. The letter also informed the DNR that GPC would be sending the 2010 semiannual monitoring summary in a separate document, and that it was investigating alternative storage options for its methanol denaturant. The methanol storage tank that was being used at the facility did not meet the MON requirements.

On August 31, 2010, GPC submitted a MON semi-annual monitoring report.

On January 19, 2011, GPC submitted an addendum to the notification of compliance status report, stating that it had installed a new methanol tank.

The MON requires Leak Detection and Repair (LDAR) on pumps and valves associated with fuel and industrial ethanol manufacturing. LDAR reduces emissions from the facility by routinely checking for leaking equipment and requiring corrections of the leaks within a specific timeframe. Under the subpart, facilities had several compliance options to choose from. GPC chose 40 CFR 63 Subpart UU which requires monthly instrument monitoring and weekly visual inspection for pumps in light liquid service.

The MON requires that Group 1 storage tanks be equipped with a floating roof and seal or be vented to a control device. The methanol storage tank at GPC that was in use until late 2010/early 2011 was considered a Group 1 storage tank under MON definitions. This was a fixed-roof tank. It did not meet MON requirements for Group 1 storage tanks. Rather than modifying the existing tank to bring it into compliance with the MON, GPC installed a new methanol tank with a capacity below 10,000 gallons. Tanks with a capacity below 10,000

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gallons are considered Group 2 Storage Tanks under the MON and are not subject to any requirements.

Currently DNR is reviewing GPC's submittals to determine if more equipment at the facility is subject to the MON. If there is other equipment subject to the MON, further evaluation by GPC would be required with possible emission reductions.

B. Applicable Law

40 CFR 63.2515(b) requires the following:

A source subject to the MON must submit its initial notification by March 9, 2004.

GPC failed to submit the initial notification of the MON by March 9, 2004. The initial notification was not submitted until March 31, 2010. The above facts indicate a violation of this provision.

40 CFR 63.2520(d)(1) requires the following:

A source subject to the MON must submit a notification of compliance status report by October 7, 2008.

GPC failed to submit the notification of compliance status report by October 7, 2008. The notification of compliance status report was not submitted until January 19, 2011. The above facts indicate a violation of this provision.

40 CFR 63.2520(b)(1) and (5) requires the following:

A source subject to the MON must submit its first compliance report, covering the period beginning on May 8, 2008 and ending on December 31, 2008 by March 31, 2009.

GPC failed to submit the first compliance report by March 31, 2009. The above facts indicate a violation of this provision.

40 CFR 63.2520(b)(3) and (5) requires the following:

A source subject to the MON must submit the semi-annual report covering the period from January 1, 2009 through June 30, 2009 by September 30, 2009. The semi-annual report covering the period from July 1, 2009 through December 31, 2009 was due by March 31, 2010.

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GPC failed to submit the semi-annual reports by September 30, 2009 and March 31, 2010. The above facts indicate violations of this provision.

40 CFR 63.2480(a) requires the following:

The LDAR program must be implemented on connectors, compressors, pumps, and valves associated with fuel and industrial ethanol manufacturing.

The compliance date for the LDAR was May 10, 2008. GPC did not begin complying with the LDAR requirements until June 2010. The above facts indicate violations of this provision.

40 CFR 63.2470(a) requires the following:

Group 1 storage tanks must be equipped with a floating roof and seal or be vented to a control device.

The compliance date for the storage tank requirements was May 10, 2008. GP did not begin complying with the storage tank requirements until late 2010 or early 2011. The above facts indicate violations of this provision.

Wastewater

The waste water violation is for failing failure to obtain a construction permit prior to the construction of a 1.9 million gallon anaerobic settler for GPC's waste water treatment system.

Construction Permit Violation

A. Facts

On August 20, 2010, GPC emailed DNR central office wastewater engineer staff informing DNR that GPC was constructing an anaerobic settler. The anaerobic settler would be a 1.9 million gallon gravity settler. GPC requested that a DNR project Manager be assigned to the project.

On September 21, 2010, DNR and GPC participated in a project initiation meeting in Des Moines; DNR Field Office 6 joined the meeting via teleconference. During the conversation, GPC indicated that construction had begun and that GPC would like to continue construction of the settler. GPC wanted to use the settler for storage of digester contents while one of the digesters was being repaired. GPC stated it would not activate the sludge basins until a construction permit was issued. GPC explained that the permit application was not submitted because of miscommunications between GPC engineering staff and GPC

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environmental staff. During the September 21, 2010 project initiation meeting the facility stopped construction as soon as it was discovered the construction permit had not been obtained.

On September 24, 2010, Jim Kacer, DNR Field Office 6 environmental specialist, visited GPC to document progress on the construction of the anaerobic settler. Mr. Kacer observed construction workers proceeding with construction of the anaerobic settler despite the fact that no construction permit application had been submitted and approved by DNR. During the inspection, GPC personnel indicated that the anaerobic settler was approximately 75% complete, excluding the connections to the anaerobic digesters and the activated sludge process.

On October 27, 2010, DNR issued GPC a Notice of Violation letter for failing to obtain a wastewater construction permit prior to beginning construction of the anaerobic settler. The letter requested GPC to not connect the settler to the activated sludge treatment project until the project was reviewed and approved by the DNR.

On October 28, 2010, GPC submitted an after-the-fact construction permit application for the anaerobic settler. Currently, DNR central office wastewater staff and GPC are working to ensure the applicable design standards were met for the existing anaerobic settler.

B. Applicable Law

567 IAC 64.2(1) requires the following:

No person shall construct, install or modify any wastewater disposal system or part thereof or extension or addition thereto without or contrary to any condition of, a construction permit issued by the director.

GPC began construction on anaerobic settler prior to obtaining a construction permit from the DNR. The project was approximately 75% complete when the application was submitted. The above-mentioned facts indicate a violation of this provision.

IV. Past History

In 2007, the GPC entered into a consent decree with the State of Iowa for violations relating to failure to obtain a PSD permit and monitoring deviations. The violations in the consent decree were similar to those in this referral but for different emission units at the facility. The company agreed to pay a civil penalty of \$538,000.00.

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In addition, GPC has been issued numerous Notice of Violation letters relating to air quality and wastewater violations.

V. Witnesses

Dennis Thielen, Diane Brockshus, Sarah Piziali, and Peter Zayudis with the Air Quality Bureau will be available during the EPC meeting to answer additional questions regarding the air quality issues. Jim Kacer, DNR Field Office 6, and Suresh Kumar, DNR Wastewater Section, will be available during the EPC meeting to answer additional questions regarding the wastewater issues.