MINUTES

OF THE

ENVIRONMENTAL PROTECTION COMMISSION

MEETING

FEBRUARY 18, 2014

IOWA DEPARTMENT OF NATURAL RESOURCES
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WINDSOR HEIGHTS, IOWA

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MEETING MINUTES

CALL TO ORDER

The meeting of the Environmental Protection Commission was called to order by Chairperson Mary Boote at 10:03 a.m. on February 18, 2014 in the DNR Hickman facility in Windsor Heights, Iowa.

COMMISSIONERS PRESENT

Mary Boote, Chair
Chad Ingels
Bob Sinclair
Gene Ver Steeg (phone)
LaQuanda Hoskins (phone)
Brent Rastetter
Max Smith, Vice-Chair

COMMISSIONERS ABSENT

Nancy Couser, Secretary
Cindy Greiman

ADOPTION OF AGENDA

Chairperson Mary Boote offered amendments to the agenda to include a swearing in ceremony for LaQuanda Hoskins and struck item #10 Appeal of Proposed Decision. Motion was made by Bob Sinclair to adopt the agenda as amended. Seconded by Max Smith. Motion carried unanimously.

APPROVED AS AMENDED

OATH OF NEW COMMISSIONER

Director Chuck Gipp swore in LaQuanda Hoskins to the Commission.

APPROVAL OF MINUTES

Motion was made by Bob Sinclair to approve the January 21, 2014 EPC meeting minutes. Seconded by Brent Rastetter. Motion carried unanimously.

APPROVED AS PRESENTED

DIRECTORS REMARKS

Director Gipp provided an update to the Commission regarding activities related to the recent legislative appropriation of an additional $700,000 for field inspections of animal feeding operations. The Department has hired all 7 positions and is currently training the new team members.

Director Gipp shared with the Commission that the Department is meeting the milestones contained within the Workplan Agreement Between DNR and US EPA. One of milestones is working with stakeholders to adopt the federal CAFO rules.

INFORMATION

CONTRACT DMACC - TRAINING FOR THE INITIAL CERTIFICATION AND MAINTENANCE OF GRADE A PUBLIC WATER SUPPLY SYSTEM OPERATORS

Laurie Sharp, Program Planner 2 of the Water Supply section of the Water Quality Bureau presented the following item.

Commission approval was requested for a three (3) year service contract with DMACC of Ankeny, Iowa. The contract will begin on February 24, 2014 and terminate on December 31, 2016. The total amount of this contract shall not exceed $68,500.00. DNR shall have the option to renew this contract long as this contract and any extensions do not exceed a six-year period.

This project will be funded through Federal Drinking Water State Revolving Fund (DWSRF) dollars set aside for the provision of technical assistance to smaller drinking water systems.
Statutory authority for this funding is found in Iowa Code section 455B.295 Funds and Accounts.

567—81.6(455B) requires certification of the operators in charge of all Community Public Water Supplies with a Grade A classification. Background: A community Grade A Public Water Supply (PWS) is either: A community water system, other than a municipal or rural water system, which serves a population of 250 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator, or a nontransient, noncommunity water system which serves a population of 500 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator.

The revised Safe Drinking Water Act of 1996 requires operators of Iowa Grade A PWSs to be certified. There are currently 361 Grade A PWSs in Iowa, with the majority located in eastern
Iowa. The eligibility requirements for a Grade A operator candidate are a high school diploma or GED and completion of a previously established, DNR-approved, Grade A course (Task 1 under Scope of Services.) Upon completion of the course, a candidate must pass the Iowa Grade A Operator Certification Exam to become certified. Maintenance of a Grade A Certificate requires 10 hours of relevant, DNR-approved Continuing Education every two years (Task 3 of Scope of Services.)

The Purpose of this contract with DMACC is for the provision of mandatory training for the initial certification and continuing education of very small system drinking water treatment operators. These very small systems include homeowner associations, mobile home parks, and daycare facilities, systems that find it difficult to fund operators and their required training.

Federal funds exist for the technical assistance and certification maintenance of these small systems.
This contract with DMACC will provide free training to these small system operators in convenient sites across the state using other Iowa community colleges as the venues. DMACC has trained, DNR approved staff and curriculum available to begin immediately.

DMACC was chosen for this project because they have DNR approved staff and curriculum available to begin immediately. They have access to a network of other community colleges across the state and have provided quality training to our Grade A operators in the past. DMACC held the previous contract and, along with cooperation from other community colleges across the state, provided the quality, timely training we asked of them.

Motion was made by Brent Rastetter to approve the agenda item as presented. Seconded by Chad Ingels. Motion carried unanimously

APPROVED AS PRESENTED

NOTICE OF INTENDED ACTION, CHAPTER 61, WATER QUALITY STANDARDS, SECTION 401 CERTIFICATION OF SECTION 404 REGIONAL PERMIT (RP 7)

Christine Schwake. Environmental Specialist of the NPDES section of the Water Quality Bureau presented the following item.

Commission approval was requested for the attached Notice of Intended Action which will amend Chapter 61.2(2) "g" to allow the Department to grant Section 401 Water Quality Certification for the Corps of Engineers (Corps) Regional Permit 7 (RP 7).

Section 401 water quality certifications are required by federal law prior to the issuance of nationwide and regional permits. This rulemaking constitutes certification by the State of Iowa that Army Corps of Engineers' (Corps') nationwide and regional permits, including Regional Permit 7 (RP 7), are consistent with Iowa's water quality standards. All of the listed nationwide and regional permits will be certified through the date of adoption. Without certification, contractors on these projects (e.g., dredging and filling in waters of the United States) would have to seek other means of approval from the State of Iowa, including submitting an individual permit from the Corps for approval. The average time to process a nationwide or regional permit is 2-4 weeks whereas the average time for an individual permit is closer to 2-4 months. This would add substantial delays to these projects.

RP 7 is a general permit issued to authorize work on bridges and road crossings of streams in Iowa and has been used since 1979. The Corps revised RP 7 to include information regarding the 2008 EPA/Corps Mitigation Rule as well as revising some of the conditions to be the same as those that would be included in an individual permit for bridge or road crossings. The 2008 Mitigation Rule is now effective and must be included in the new permit.

The proposed changes contained in this rule-making package will be published in the Iowa Administrative Bulletin and will also be found on the DNR website. The Public Hearing will be held on April 9, 2014 with public comments (oral or written) due by COB on April 18, 2014.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Brent Rastetter. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH IOWA STATE UNIVERSITY FOR HYDROLOGIC MODELING IN THE PRAIRIE POTHOLE REGION

Calvin Wolter, Geologist 3 of the Geographic Information Systems section of the Iowa Geological and Water Survey Bureau presented the following item.

Commission approval was requested for a one year-service contract with ISU of Ames, IA. The contract will begin on 2/19/2014 and terminate on 1/20/2015. The total amount of this contract shall not exceed $39,000. DNR shall have the option to renew this contract long as this contract and any extensions do not exceed a six-year period.

Funding Source:
This contract will be funded through USFWS Grant # F12AP01057 X2R1 Iowa Wetland Assessment – Phase II.

Background:
Since acquiring LiDAR elevation data, the DNR has been able to effectively map restorable wetland basins across the Prairie Pothole Region of Iowa. However, the DNR lacks the information needed to determine which restorable wetlands offer the greatest water quality benefit if restored.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: scientific modeling and guidance on wetland restoration with the goal of maximizing water quality benefits.

Contractor Selection Process:
ISU was chosen using the University process. ISU was chosen for this project because they have the expertise, experience, and credibility necessary to review the existing scientific research, compile relevant datasets, and perform hydrologic modeling for this landscape in Iowa.

Commissioner Max Smith inquired whether other universities were also able to perform this work. Bill Ehm shared with the Commission that each university has special expertise, and the DNR contracts with those universities based on that expertise.

Commissioner Chad Ingels abstained from voting due to his employment with Iowa State University.

Motion was made by Bob Sinclair to approve the agenda item as presented. Seconded by Max Smith. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT WITH THE UNIVERSITY OF TENNESSEE FOR STREAM BANK EROSION ANALYSES

Calvin Wolter, Geologist 3 of the Geographic Information Systems section of the Iowa Geological and Water Survey Bureau presented the following item.

Commission approval was requested for a two year-service contract with the University of Tennessee of Knoxville, Tennessee. The contract will begin on 2/19/2014 and terminate on 2/19/2016. The total amount of this contract shall not exceed $80,000. DNR shall have the option to renew this contract as long as this contract and any extensions do not exceed a six-year period.

Funding Source:
This contract will be funded through IDOT Grant RB10-014 Bank Stability Assessment Tool.

Background:
Since the early 1900s, accelerated bank erosion in Iowa has resulted in the costly damage to and loss of infrastructure, pipelines, fiber-optic lines, and adjacent farmland with the damages to highway and railroad bridges producing the highest costs. The excessive stream bank erosion observed in Iowa reflects the channel instability stemming from extensive land use change and channelization that occurred throughout much of the 20th century.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: a robust assessment tool that systematically identifies and quantifies the severity of bank erosion near bridge sites at a suitable spatial scale. This assessment tool will also be combined with flow stage information to determine Factors of Safety and bank recession rates to identify areas prone to erosion.

Contractor Selection Process:
The primary investigator (Dr. Thanos Papanicolaou) was chosen using the University process while he was employed by the Iowa Institute of Hydraulics Research at the University of Iowa. The University of Tennessee was chosen for this project because Dr. Papanicolaou is now employed by that institution and working in cooperation with the University of Iowa.

Commissioner Bob Sinclair inquired into the communication methods of the data with DOT. Calvin Wolter shared with the Commission the GIS mapping layers DOT utilizes with DNR information.

Motion was made by Chad Ingels to approve the agenda item as presented. Seconded by Bob Sinclair. Motion carried unanimously

APPROVED AS PRESENTED

REVISION TO STATE IMPLEMENTATION PLAN FOR MUSCATINE, IOWA

Jim McGraw, Supervisor of the Program Development section of the Air Quality Bureau presented the following item.

The U.S. EPA requested that the Department revise the State Implementation Plan (SIP) to address an EPA finding that Iowa's SIP was inadequate to maintain the 2006 24-hour fine particulate (PM2.5) National Ambient Air Quality Standard (NAAQS) in Muscatine. The Commission was requested to approve the SIP revision for preventing future violations of the 24-hour PM2.5 NAAQS in Muscatine. Upon approval of the Commission, the SIP will be forwarded to U.S. EPA for federal notice and approval.

Reason for SIP Revision

On July 14, 2011, U.S. EPA Region 7 found that the Iowa SIP was substantially inadequate to maintain the 24-hour NAAQS for PM2.5 in Muscatine County, Iowa (76 FR 41424). PM2.5 measurements from a PM2.5 monitor located at Garfield School (also referred to as Muscatine High East Campus) show that the site oscillates in and out of attainment with the 24-hour PM2.5 NAAQS. Recent three year design values including 2005-2007, 2007-2009, and 2008-2010 have violated the 24-hour PM2.5 NAAQS.

EPA's finding requires the SIP to be revised to include measures to attain and maintain the 24-hour PM2.5 NAAQS in Muscatine. Specifically, EPA required that the SIP revision include a modeling demonstration showing the reductions needed to attain and maintain the PM2.5 NAAQS, control measures necessary to attain and maintain the PM2.5 NAAQS, and enforceable commitments to adopt and implement contingency measures if the PM2.5 NAAQS is not attained or maintained at the violating monitor.

Affected Sources

The Department determined that three major sources of air pollution in the Muscatine area significantly contribute to predicted (modeled) PM2.5 exceedances of the standard in the vicinity of the Garfield School monitor. These facilities are Grain Processing Corporation (GPC), Muscatine Power & Water (MPW), and Union Tank Car Company (UTLX).

PM2.5 Control Strategy

Control measures were developed based on dispersion modeling and facility operational considerations. These control measures provide for expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions from operations at GPC, MPW, and UTLX. Changes that have been made or will be made at these facilities generally include various combinations of the following:

- Installation of new particulate controls or improvements to existing particulate controls on a number of sources;
- Cessation of operation of various existing equipment;
- Replacement of several existing operations with new, more efficient equipment;
- Regular sweeping and watering of road surfaces;
- Increasing select stack heights; and
- Restricting operation of certain processes.

It is estimated that PM2.5 emissions from these three facilities combined will be reduced by nearly 370 tons per year from 2007 and 2008 actual emissions levels. The majority of the PM2.5 emissions reductions will come from GPC. The controls and other changes that will be implemented at GPC are also estimated to result in significant emissions reductions for several other regulated air pollutants, most notably sulfur dioxide (SO2).

The control strategy is enforceable through an Administrative Consent Order with GPC and issued construction permits with MPW and UTLX. Implementation of control measures at MPW and UTLX will be completed by

mid-2014. Due to the scale and complexity of the changes at GPC, GPC has developed a phased implementation schedule that began in 2013 and concludes in December 2016.

Summary of Public Comment Activities
Two public comment periods were conducted for the SIP revision. The first comment period was held from May 21 through June 25, 2013, and included a public hearing in Muscatine on June 24, 2013. Modifications to the SIP revision document were made in response to the comments received during this comment period. The modified SIP revision document was placed on a second public comment period from November 16 through December 20, 2013. A second public hearing was conducted in Muscatine on December 18, 2013. Additional minor changes were made to the SIP revision document in response to comments received during the second public comment period. The responsiveness summaries for the second public comment period is included with the SIP revision document.

Commissioner Max Smith inquired into the effects of increasing the height of smoke stacks. Jim McGraw shared with the Commission with higher smoke stacks there is a larger dispersion area of the pollutants.

Commissioner Max Smith inquired into the overall impact of watering and sweeping roads. Jim McGraw shared with the Commission the impact overall is minimal but for those near the roads the impact is great.

Motion was made by Brent Rastetter to approve the agenda item as presented. Seconded by Max Smith. Motion carried unanimously

APPROVED AS PRESENTED

PUBLIC PARTICIPATION

John Crotty – Iowa Environmental Council
John Crotty shared with the Commission that the Iowa Environmental Council submitted 2 rounds of comments to the Department for the state implementation plan for Muscatine, Iowa and asked for the timelines to be updated. However, the Department did not update its schedule despite being 3 years behind EPA required timelines. EPA has linked increased particulates to not only the health of the environment but the health of citizens. EPA will be soon calling for improvements in meeting sulfur dioxide standards in the Muscatine area and the Department must meet those timelines.

Chris Petersen – Farmer
Chris Petersen shared with the Commission that he lives in Clear Lake, Iowa and is a member of a number of agricultural and environmental groups. He expressed concern for the ongoing problem of clean water in Iowa. Industrial agriculture has taken over the family farms. In other countries, animal feeding facilities have different community involvement. In Iowa, bad actors are not even punished properly. He encouraged the Commission to stand up for the right thing.

Sharon Glasgow – Self
Sharon Glasgow shared with the Commission she is a resident of the Des Moines metro area and is concerned with the pollution of the state. She has been in Iowa for over 70 years and she sees the environment getting worse. She feels that she is more important than a pig or cow and she wants a clean environment. Not one of us has a right to pollute the environment – rich or poor, rural or city, old or young. She encouraged the Commission to be courageous and impose heavy fines for violations and require a facility to be shut down after three strikes.

Barb Kalbach – ICCI
Barb Kalbach shared with the Commission House File 519 allowed the factory hog farms to begin. She summarized the number of manure spills over the years and how the number of spills is increasing. One facility with 10 million gallons of manure to transport and apply over 800 acres in a 10 mile area is ripe for accidents and spills. Since it is all about money, how does Iowa attract tourists with dirty water?

Larry Ginter – ICCI
Larry Ginter shared with the Commission how ICCI members are angry. The DNR continues to take a cavalier attitude toward pollution. When spills occur, the factories are given a clean bill of health. He asked what is it going to take for the DNR to start issuing clean water permits. He encouraged the Commission to start issuing clean water permits for facilities with 1250 animal units.

Garry Klicker – ICCI
Garry Klicker shared with the Commission he is a small family farmer. He asked for clean water permits to be issued and good inspections of hog and CAFO facilities. He summarized various manure spills which had occurred all from the same cause - a broken pipe. He doubts the farmers are providing accurate information. If a pipe breaking is the truth, then inspections of older facilities must be more thorough.

Vern Tigges – ICCI
Vern Tigges shared with the Commission he was a farmer from Adel. He indicated that 5 commissioners have interest in agriculture. He expressed concern that the people writing the rules have a financial bias. He prefers his tax payer dollars go to inspections rather than cleaning up manure spills.

Megen Kaebling – ICCI
Megen Kaebling shared with the Commission she was representing her parents who could not be in attendance. Their family owns a farm and has concerns about manure run-off from the neighboring farm. Multiple berms have been built on the cattle lot and visually look deep enough to be considered lagoons. They are not confident the DNR can regularly inspect and ensure the earthen structures are in compliance. There is no clean water permit required even though there have been 4 discharges into the river.

Lori Nelson – ICCI
Lori Nelson shared with the Commission a poster board with photos showing manure application next to homes in her area. The applicator spills manure on the road and ditches which leads to the creek. This is not isolated and goes on around the state. She spoke to the Governor and he said it was illegal and the DNR should handle the manure spills.

Jim Yungclas – ICCI
Jim Yungclas shared with the Commission a single photo of a new farm. His home is surrounded by factory farms. This location of the new farm is in low land and poor for crops. A clean water permit is not required because they don't discharge. This specific facility has blowers that discharge particulates into the air. The particulates get into the air and land in the land and water which leads to the Boone River. He asked the Commission that if these facilities don't need a permit then how come the waters are getting more polluted?

Jim Ealy – ICCI
Jim Ealy shared with the Commission Appanoose County residents are fighting for their quality of life. There are 3 proposed new confinements coming into the area. All 3 sites are upstream from important waterways. Two acres of farmland were sold to an LLC which is not a local farmer. The site is built so that if there are spills it will go into the lake or creek. A clean water permit is needed for all facilities.

Harold Hume – ICCI
Harold Hume shared with the Commission Soap Creek is just miles from a confinement and manure will at some point get into the creek. In 50 years, there have been no animal facilities in the area. Now there will be more hogs than people. Building a home is 1/3 the cost of an animal feeding facility but the facility only has to pay taxes 1/3 the value of the facility. He has invited Bill Ehm and Gene Tinker to look at the separation distances and flood plain concerns but no one has showed up.

Brenda Brink – ICCI
Brenda Brink shared with the Commission how ICCI keeps coming back to the EPC because it is business as usual. The industrial farms increase and environmental protection has decreased. Her friend who grew up iin Iowa but now works in another state has indicated that Iowa has decreased in environmental protection. Hog facilities create 150 times more sewage than all the citizens in the state of Iowa and the hog manure is untreated. The Commission has a responsibility to protect the environment.

Susie Petra – ICCI
Susie Petra shared with the Commission in April last year a dairy had a manure spill. The facility was constructed in 2012 and should have been up to current standards. The facility had an emergency backup system too. But there was a manure spill of unknown volume that flowed towards the Sioux Center drinking water well. The DNR needs to take better care of protecting the water.

Barb Lang – ICCI
Barb Lang shared with the Commission she has been a lifelong resident of Iowa and will die in Iowa but has watched for years the pollution problem. She asked the Commission and the director to improve the water quality. Iowa is the 2nd most polluted state in the nation. Over 40 years, Iowa has become more polluted and the CAFOs have caused the problem. Voluntary compliance brings in corporations who build CAFOs. All CAFOs need a permit like those issued in other states.

Winifred Standing – ICCI
Winifred Standing shared with the Commission every farm in Iowa is a ticking time bomb. She summarized the events of a manure spill where the applicator fell asleep and was not certified. Her mother was stern and would say "I mean it." She asked for the DNR to do their job and she means it.

Ellis Standing – ICCI
Ellis Standing shared with the Commission how he grew up on a farm and has been around agriculture all his life which has been for almost 80 years. He referenced a manure spill caused by a deer / truck accident.

Ross Grooters – ICCI
Ross Grooters shared with the Commission his profession of driving locomotives. He gets to see beautiful parts of Iowa during his travels. At one stop he watches dozens of semis driving to a factory farm operation. He also sees numerous CAFOs and manure being applied to snow and frozen ground. He knows that manure applied on frozen ground won't absorb into the ground. It will go down stream. Last year there were 76 spills in Iowa.

Bob Allen – ICCI
Bob Allen shared with the Commission every factory farm is a ticking time bomb and it is just a matter of time before they pollute. He summarized the events of a manure spill. He wished for the DNR to take water quality seriously and catch problems before spills occur and have tough fines and penalties for those who pollute.

Ray Benter – ICCI
Ray Benter shared with the Commission information about a manure spill in Sac County. The DNR didn't provide enough information about the inspection. A hose failing during the pumping of manure does not provide much information. He inquired into the criteria for an inspection. Other industries are inspected and monitored heavily. He has to pay high water bills because of the cost to clean drinking water. DNR needs to catch problems before they happen and have tough fines to deter future spills.

Patty Gatcenburger – ICCI
Patty Gatcenburger shared with the Commission information about a manure spill. She asked for the DNR to do their job.

Stephanie Simmons – ICCI
Stephanie Simmons shared with the Commission she is a Guthrie County resident, retired nurse, pastor, and concerned citizen. Once a pastor, you always are and can drop a sermon on anyone at anytime. No matter where you go or don't go, Jesus had some good things to say. One thing he said was that what you do to the least of my brothers, you do onto me. She hopes the Commission does not think this audience as the least of their brothers. She requested for "boots on the ground" inspections and not just inspections by driving past a facility. She asked that the Commission protect the people and the environment and do the right thing.

Margaret Vernon – ICCI
Margaret Vernon shared with the Commission her move from Minnesota to Iowa and how she didn't want to leave her Minnesota lakes and streams. She has watched over the years Iowa's lakes and streams become dirty. Minnesota has better rules to keep its water clean. Iowa should have permits for industrial farms.

Patty McGhee- ICCI
Patty McGhee shared with the Commission a friend of her mother's lived in the country in Missouri. A factory farm moved close the farm and her friend developed a health problem which debilitated her quality of life. She asked the Commission to consider the effects of factory farms on humans. Any spill is too much and is a serious problem. She asked that every factory farm have a clean water permit, inspections be tough, find things that are wrong before a spill, and have tough fines.

Joe Fagan – ICCI
Joe Fagan shared with the Commission he grew up on a farm and has family members with farms. Every factory farm in Iowa is a ticking time bomb. He summarized events of a manure spill that had a hose break and manure applicators falling asleep on the job.

Lori Jones – ICCI
Lori Jones shared with the Commission that a certain factory farm has had 3 different spills. Each factory farm needs a clean water permit. The DNR needs to have good inspections to find problems before a manure spill.

Lee Barclay – ICCI
Lee Barclay shared with the Commission each factory farm is a ticking time bomb. Of the 76 spills in 2013, he shared the events of one specific facility. The facility owners didn't even live in Iowa. One manure spill is too many. The DNR needs to do its job and take the water crisis seriously. The dead zone in Louisiana is now being called the Iowa Zone. Every factory farm needs a clean water permit. The inspections are a joke and they need to be better.

Sarah Gardner – ICCI
Sarah Gardner shared with the Commission events of a manure spill. Her family enjoys kayaking but in the past few years, she has watched the waters get worse. She worries her daughter won't come back to Iowa to live. Inspectors need to do more onsite inspections and impose tougher fines for polluters.

Jo Rod – ICCI
Jo Rod shared with the Commission a vacation she and her husband went on where they met people from North Carolina. In North Carolina hogs had inundated the state but state officials saw the problem arising and shut them down. When the doors of the factory farms were closed in North Carolina, they moved to Iowa. She can see the same problems happening in Iowa.

Larry Fitzpatrick – ICCI
Larry Fitzpatrick shared with the Commission he has been a lifelong Iowan and worked as a farmer for 30 years and now works as a wastewater treatment operator. He does not believe the DNR is helping to minimize water pollution. At his wastewater treatment plant, they do everything they can to protect the Iowa River. People holding, transporting, and applying manure are not certified like he is.

Bob Rod – ICCI
Bob Rod shared with the Commission a summary of one of the 76 manure spills in Iowa in 2013. It was small and cleaned up but that farm had 8 prior manure spills. He asked for better inspections to prevent serial spillers.

Ron Gibson – ICCI
Ron Gibson shared with the Commission that a mile from his home a hog farm is being built. This hog facility will devalue his home 30-40%. For 50 years these hogs have been bio-mutated and their manure gets into the drinking water. The industry is legal but not moral.

Jim Walters – ICCI
Jim Walters shared with the Commission that accountability is lacking in Iowa. The polluters are not being accountable. The inspectors aren't holding the polluters accountable. The regulators are not holding the industry accountable. The legislature is not holding the department accountable. The chain is broken.

Chris Kruzic – ICCI
Chris Kruzic shared with the Commission events of a manure spill in Sioux County. It may have only been 100 gallons but if he took his septic tank and dumped it in the river, he would be heavily fined.

Jess Mazour – ICCI
Jess Mazour shared with the Commission every factory farm in Iowa is a ticking time bomb. They will eventually have a manure spill. In 2013 there were 76 spills which is more than one a week. Iowa says they are a no discharge state but they are discharging. She summarized the events of a manure spill. Every factory farm is near a waterway. One manure spill is one too many. She summarized the amount of manure from hogs compared to metro areas across the nation.

Evan Burger – ICCI
Evan Burger shared with the Commission the events of a manure spill from a DNR report which he believed was inaccurate. He requested transparency from the Department and a modern, up-to-date database which can be uploaded to a website. He also wants a list of upcoming inspection dates and locations.

Hugh Espey – ICCI
Hugh Espey shared with the Commission that he speaks in favor of accountability, government for public interest, and enforcing the Clean Water Act. Iowa has a problem because of corporations and special interest groups. The fight for clean water enforcement started in 2007 by ICCI, Sierra Club, and Environmental Integrity Project. The groups will keep coming back. A Commissioner sits on the Commission and has had a manure spill. He requested clean water permits, tough inspections, and tough fines and penalties.

Stephen Tews – ICCI
Stephen Tews shared with the Commission that he lives in southeast Iowa and all the water ways of the state flow past him. He summarized the events of a manure spill which didn't have a person onsite while the pump was running. He stated that no one should leave a pump unattended. Voluntary regulation isn't working.

Sharon Donovan – ICCI
Sharon Donovan shared with the Commission every factory farm needs a clean water permit. The manure spills are not ticking time bombs, they have gone off. Expecting 15 inspectors to do over 8000 inspections is a joke. The people of Iowa know you are not doing your job and being responsible. Under your guidance, you have made Iowa the 48th state for clean water. Iowa should stand and set an example for the rest of the country.

Kevin Shilling – ICCI
Kevin Shilling shared with the Commission how he stopped coming to the EPC meetings about 3 years ago when the Commission started working with the factory farm industry. The chair of the Commission should find out who on the Commission has stock in the factory farm industry and not allow them to vote on agricultural topics. They are voting on critical things for Iowa for their own interest.

Debbie Bunka – ICCI
Debbie Bunka shared with the Commission ICCI are everyday Iowans making extraordinary choices to stand up as citizens. Throughout the morning, ICCI has shared examples of the sharp increase of manure spills in 2013. Every factory farm needs a permit. All other businesses are required to be permitted. She asked for the Department to issue clean water act permits. A cost benefit analysis shows that it is cheaper to pollute and take the fine. She asked for strict enforcement of polluters and serious consequences for those who pollute.

Public Comment cards were submitted after 10:30 a.m. by David Goodner and George Naylor.

End of Public Comment

CONTRACT WITH THE UNIVERSITY OF IOWA FOR SHALLOW LAKE MONITORING SUPPORT

Roger Bruner, Supervisor of the Watershed Monitoring and Assessment section of the Iowa Geological and Water Survey Bureau presented the following item.

Commission approval was requested for a 1 year-service contract with The University of Iowa on behalf of the State Hygienic Laboratory of Iowa City, Iowa. The contract will begin on April 15, 2014 and terminate on April 15, 2015. The total amount of this contract shall not exceed 38,491.20.

Funding Source:
This contract will be funded through Environment First Appropriations and the Lake Restoration Fund.

Background:
Shallow lakes monitoring started in 2005-2006 and has provided the DNR and other project partner's beneficial pre- and post- renovation information. This information is shared with the public and used by the DNR to support management and planning decisions and guide future successful restorations.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: laboratory analytical services to DNR in order to help assess the effectiveness of shallow lakes restoration projects.

Contractor Selection Process:
University of Iowa – State Hygienic Laboratory was chosen using the intergovernmental agreement process. The University of Iowa – State Hygienic Laboratory was chosen for this project because of their laboratory analysis expertise.

Commissioner Brent Rastetter inquired into the average depth of a shallow lake. Roger Bruner shared with the Commission the various factors that classify shallow lakes.

Motion was made by Max Smith to approve the agenda item as presented. Seconded by Bob Sinclair. Motion carried unanimously

APPROVED AS PRESENTED

CONTRACT AMENDMENT WITH THE STATE HYGIENIC LABORATORY AT THE UNIVERSITY OF IOWA FOR RATHBUN WATER QUALITY MONITORING

Roger Bruner, Supervisor of the Watershed Monitoring and Assessment section of the Iowa Geological and Water Survey Bureau presented the following item.

Commission approval was requested for an amendment to the twenty-one month-service contract with State Hygienic Laboratory at the University of Iowa of Iowa City, IA. The contract began April 1, 2013 and will terminate on December 31, 2014. The total amount of the original contract was not to exceed $ 317,373.12 and this amendment does not increase this amount.

This contract will be funded through a US EPA grant (Section 106 of the CWA). The Rathbun Land and Water Alliance (RLWA) also has additional funds available if necessary. Contracting Authority is granted under the Code of Iowa 455B.103.

Background:
RLWA has funded water quality monitoring activities throughout the Rathbun watershed since 1997, developing partnerships that have led to successful watershed improvement efforts. The DNR has long supported the efforts of the RLWA and has utilized the data collected through their programs to characterize water quality in the Rathbun watershed, track the trends in water quality over time, measure the success of best management practices funded through the 319 program, estimate loading of pollutants to Rathbun Lake, and provide the RLWA with the information necessary to manage and evaluate Rathbun Lake most appropriately.

This contract and its amendment encompass expanded water monitoring efforts in the Rathbun Lake watershed to provide the data needed to develop a credible computer model of the lake-watershed system. The computer model will be used to develop Total Maximum Daily Loads (TMDLs) for the lake system. This contract is a partnership with the Rathbun Land and Water Alliance (RLWA), the DNR Watershed Improvement Section, the DNR Watershed Monitoring and Assessment Section, and the US Army Corps of Engineers.

The goal is to develop a robust TMDL to guide future watershed planning and implementation strategies. The data collected under this contract will also inform the RLWA, DNR, and US EPA on any progress made in addressing the water impairments in the lake.

Purpose: Due to the 2013 drought, the entire amount of money was not spent and unspent funds (as of January 28, 2014) of $234,217.79 exist. The purpose of this amendment is to provide for expenditure of the unspent funds for the completion of the remaining original tasks, as revised by this amendment, and to add one new task. The funds will be spent within the existing contract framework and the work accomplished will render additional information. There is no change to the contractor or the overall goals of the original contract.

Contractor Selection Process:
The State Hygienic Laboratory at the University of Iowa (SHL) was chosen based on the Iowa Code section 455B.103, which allows the DNR to contract with public agencies of the state. SHL has sample collection and analysis expertise.

Motion was made by Chad Ingels to approve the agenda item as presented. Seconded by Max Smith. Motion carried unanimously

APPROVED AS PRESENTED

MONTHLY REPORTS

Bill Ehm shared with the Commission a summary of:

- Field Office 5 has moved from SW7th leased offices to the Hickman facility. Water Supply team members have moved to the Wallace Building.
- Iowa Geological and Water Survey Bureau team members have been hired by the University of Iowa - IIHR. The remaining team members in Iowa City will work out of the Des Moines office starting April 14th.
- The Environmental Services Division will be realigning from 5 to 4 bureaus.
- Deputy Director Bruce Trautman has been presenting the Manure on Frozen Ground Report to members of the Legislature.

The following monthly reports have been posted on the DNR website under the appropriate meeting month: http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx

1. Rulemaking Status Report
2. Variance Report
3. Enforcement Status Report
4. Administrative Penalty Report
5. Attorney General Referrals Report
6. Contested Case Status Report
7. Bypass Report
8. Manure Release Report
9. Hazardous Conditions Report

INFORMATION

GENERAL DISCUSSION

- Commissioner Gene VerSteeg shared with the Commission the comment during Public Comments was inaccurate and he does believe the Clean Water Act needs to be enforced.
- Chairperson Mary Boote thanked the Commissioners for the decorum during the Public Comments period. It is important for the Commission to receive information from the citizens they represent.
- Chairperson Mary Boote expressed her gratitude for the officers present during the meeting – they helped facilitate a successful meeting.
- Commissioner Chad Ingels inquired into how the Department is gathering information for AFO desktop assessments. Bill Ehm shared with the Commission the multiple methods of gathering input.

INFORMATION

ADJOURNMENT

Motion was made by Max Smith to adjourn the meeting. Seconded by Bob Sinclair. Motion carried unanimously

ADJOURNED

Chairperson Boote adjourned the Environmental Protection Commission meeting at 12:51 p.m., Tuesday, February 18, 2014.

Bruce Trautman, for,

Chuck Gipp, Director

Nancy Couser

Nancy Couser, Secretary

Jim Kangclas EPL 2-18-14 Public Comment

Gary Kleckner 641 675 3841
18695 Unity Trail
Bloomfield IA 52537

3 sewage spills from 3 separate factory farms in 3 months from 3 different areas of the state, all from the same cause. I have serious doubts that any of these operators are telling the truth. In fact, I doubt the public ever gets complete and accurate facts from any factory farm, the DNR, and certainly not this EPC commission, loaded as it is with factory farm owners and supporters.

But if these 3 cases are an exception, and the truth is being told, what then, would be a reasonable cause of action? Isn't it time the DNR does real inspections… especially of these older facilities…especially the ones with a history of regular sewage spills? How much waste has to be dumped into our rivers and streams before real action is taken?

It is well known that the soil, especially in Southern Iowa, moves each year with the freezing and thawing cycle. Basements crack and collapse quite frequently. Wouldn't it be reasonable to run a camera through the piping between sewage lagoons to check for breaks before pumping toxic pollution through them?

All CAFOs in IA should have NPDES permits as required by the Clean Water Act of 1972. It's a forty year old law. Isn't it time it was enforced?

If 3 identical dumps of sewage in 3 months from 3 locations doesn't require meaningful action, what does? There are streams in IA where nothing lives. No fish, no bugs, nothing. I and a lot of other Iowans have been had our health ruined by this industry. Do rural populations have to start dieing before you do your job?

Heidi Vittitoe used to set on this commission. Her own daughter almost drowned in sewage on her farm. What will it take for you force the DNR to take action?

The Maschhoff site was inspected in August by The DNR and given a green lite to pollute.

We need Thorough, complete inspections To avoid a catastrophic spill.

Intro Self

In 1996, HF 519 allowed the CAFO industry to develop in Iowa.
19 years later, Iowa has absorbed 800+ manure spills across the state.
74 manure spills occurred in 2013 — the highest number ever in 1 year.
And these are the ones we know about.
These spills have resulted in a steadily increasing number of impaired (or polluted) Iowa waterways. We are up to 630.

DNR says Iowa is a 0 discharge state -- a lie.
A factory farm is a ticking time bomb
Tell CAFO story.

~~Question: Do you really think that 4 million gal. of manure could fracture~~

Do you really think that 10 mill. gallons of liquid manure could be trucked, piped + injected in the same 10-mile radius year after year w/ a spill?

As a whole, Iowans ?, what they are drinking from their tap.

Iowans + tourists are restricted from swimming in state waters. They usu. refuse to eat the fish they catch in our lakes + rivers.

Forget state residents who have to live next to CAFO's. Since it's all about money, how does Iowa grow a tourism industry w/ filthy lakes + rivers?

It's time the DNR does its job.

3 things are needed from DNR to even begin to make the CAFO industry tolerable for IA's residents + tourism:

1) QFF needs a CWA permit
2) QFF should be subjected to good inspections on a regular basis
3) Tough fines + penalties should always be implemented. This helps defer future pollution. So far it is cheaper to pollute than to comply.

Our water quality can improve only by doing more than the bare minimum.

Submitted 2/18/2014
Paul Kalzek
Dexter, Iowa

DM

Harold Holmes

DNR, Say they don't have manpower to inspect, Well there is what industry calls, random sampling where one person can oversee forty people at work. You come in unannounced and thru short periods of time will see accurate analysis.

Thank you

Agenda

Environmental Protection Commission

Tuesday, February 18, 2014
DNR Air Quality Suite 1
7900 Hickman Road
Windsor Heights, Iowa

10:00 AM – EPC Business Meeting begins
10:30 AM – Public Participation[1] – Requests to speak must be submitted to Jerah Sheets at Jerah.Sheets@dnr.iowa.gov or 515-313-809 prior to the meeting or at the meeting prior to the start of Public Participation

	Agenda topics	
1	Approval of Agenda	
2	Approval of Minutes	
3	Director's Remarks	
4	Contract DMACC - Training for the Initial Certification and Maintenance of Grade A Public Water Supply System Operators	Laurie Sharp (Decision)
5	Notice of Intended Action, Chapter 61, Water Quality Standards, Section 401 Certification of Section 404 Regional Permit (RP 7)	Christine Schwake (Decision)
6	Contract with Iowa State University for Hydrologic Modeling in the Prairie Pothole Region	Calvin Wolter (Decision)
7	Contract with the University of Tennessee for Stream Bank Erosion Analyses	Calvin Wolter (Decision)
8	Revision to State Implementation Plan for Muscatine, Iowa	Jim McGraw (Decision)
9	Contract with the University of Iowa for Shallow Lake Monitoring Support	Roger Bruner (Decision)
~~10~~	~~Appeal of Proposed Decision - Phoenix C & D Recycling, Inc.~~	~~Jon Tack (Decision)~~
11	Contract Amendment with the State Hygienic Laboratory at the University of Iowa for Rathbun Water Quality Monitoring	Roger Bruner (Decision)
12	Monthly Reports	Bill Ehm (Information)
13	General Discussion	
14	Items for Next Month's Meeting • March 18, 2014 – EPC Business Meeting, Windsor Heights • April 12, 2014 – EPC Business Meeting, Windsor Heights	

For details on the EPC meeting schedule, visit http://www.iowadnr.gov/InsideDNR/BoardsCommissions.aspx.

[1] Comments during the public participation period regarding proposed rules or notices of intended action are not included in the official comments for that rule package unless they are submitted as required in the Notice of Intended Action.

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **4** **DECISION**

Contract DMACC - Training for the Initial Certification and Maintenance of Grade A Public Water Supply System Operators

TOPIC

Recommendations:
Commission approval is requested for a three (3) year service contract with DMACC of Ankeny, Iowa. The contract will begin on February 24, 2014 and terminate on December 31, 2016. The total amount of this contract shall not exceed $68,500.00. DNR shall have the option to renew this contract long as this contract and any extensions do not exceed a six-year period.

Funding Source:
This project will be funded through Federal Drinking Water State Revolving Fund (DWSRF) dollars set aside for the provision of technical assistance to smaller drinking water systems.

Statutory authority for this funding is found in Iowa Code section 455B.295 Funds and Accounts.

Background:
567—81.6(455B) requires certification of the operators in charge of all Community Public Water Supplies with a Grade A classification.
Background: A community Grade A Public Water Supply (PWS) is either:
A community water system, other than a municipal or rural water system, which serves a population of 250 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator, or a nontransient, noncommunity water system which serves a population of 500 persons or less and provides no treatment other than hypochlorination or treatment which does not require any chemical addition, process adjustment, backwashing or media regeneration by an operator.

The revised Safe Drinking Water Act of 1996 requires operators of Iowa Grade A PWSs to be certified. There are currently 361 Grade A PWSs in Iowa, with the majority located in eastern
Iowa. The eligibility requirements for a Grade A operator candidate are a high school diploma or GED and completion of a previously established, DNR-approved, Grade A course (Task 1 under Scope of Services.) Upon completion of the course, a candidate must pass the Iowa Grade A Operator Certification Exam to become certified. Maintenance of a Grade A Certificate requires 10 hours of relevant, DNR-approved Continuing Education every two years (Task 3 of Scope of Services.)

Purpose:
The Purpose of this contract with DMACC is for the provision of mandatory training for the initial certification and continuing education of very small system drinking water treatment operators. These very small systems include homeowner associations, mobile home parks, and daycare facilities, systems that find it difficult to fund operators and their required training.
Federal funds exist for the technical assistance and certification maintenance of these small systems.

This contract with DMACC will provide free training to these small system operators in convenient sites across the state using other Iowa community colleges as the venues. DMACC has trained, DNR approved staff and curriculum available to begin immediately.

Contractor Selection Process:
DMACC was chosen for this project because they have DNR approved staff and curriculum available to begin immediately. They have access to a network of other community colleges across the state and have provided quality training to our Grade A operators in the past.

Contract History:
DMACC held the previous contract and, along with cooperation from other community colleges across the state, provided the quality, timely training we asked of them.

Laurie Sharp, Program Planner 2
Water Supply Section
Water Quality Bureau
Environmental Services Division

Obligation	Task Milestone Date
Task 1: Initial Grade A Certification Classes: Plan, schedule and conduct twelve (12), six (6) hour DNR Initial Grade A Certification Curriculum Provided workshops on DNR approved dates and at DNR approved venues. Planning and Scheduling: • The Service Provider shall plan and schedule the DNR curriculum-provided workshops. • No later than 45 days prior to the date of each workshop, the Service Provider shall mail brochures advertising the workshop to the target audience using the electronic address list provided by the Agency. • The Service Provider's brochures shall indicate the type of information the participants should bring to the workshop and that the workshops, including all the corresponding materials, have been funded through the DNR. • Each workshop shall accommodate up to 25 participants. • Each workshop and all course material shall be provided to each participant free of charge. Conduct Workshops: • The Service Provider shall conduct twelve (12), six (6) hour continuing education courses using a curriculum provided by the DNR. The Service Provider shall use an DNR preapproved instructor for all courses. Reporting: • The Service Provider shall distribute evaluation forms to the participants and encourage them to complete and return them. • Within 10 business days upon completion of each workshop, a report shall be submitted to the DNR detailing a workshop evaluation summary along with a list of class participants and their corresponding PWSID number.	No later than December 31, 2016.
Task 2: Additional Initial Grade A Certification Class upon IDNR Request: Plan, schedule and conduct one (1) additional six (6) hour Initial Grade A Certification Curriculum- provided workshop on a DNR requested date and at a DNR requested venue. Planning and Scheduling: • The Service Provider shall plan and schedule the DNR curriculum	No later than December 31, 2016.

provided workshop on the DNR requested date and at the DNR requested venue. • The Service Provider shall mail brochures advertising the workshop to the target audience using the electronic address list provided by the Agency. • The Service Provider's brochures shall indicate the type of information the participants should bring to the workshop and that the workshops, including all the corresponding materials, have been funded through the Iowa Department of Natural Resources. • The workshop shall accommodate up to 25 participants. • The workshop and all course material shall be provided to each participant free of charge. Conduct Workshops: • The Service Provider shall conduct one (1), six (6) hour "Initial Grade A Certification" Curriculum- provided workshop. The Service Provider shall use an DNR pre-approved instructor. Reporting: • The Service Provider shall distribute evaluation forms to the participants and encourage them to complete and return them. • Within 10 business days upon completion of each workshop a report shall be submitted to the DNR detailing a workshop evaluation summary along with a list of class participants and their corresponding PWSID number.	
Task 3: Grade A Continuing Education Workshops: Plan, schedule and conduct twelve (12), five hour continuing education workshops on DNR approved dates and at DNR approved venues. Planning **and Scheduling:** • The Service Provider shall plan and schedule for twelve (12) Grade A continuing education courses which include no less than five (5) hours training for each workshop. • No later than 45 days prior to the date of each workshop, the Service Provider shall mail brochures advertising the workshop to the target audience using the electronic address list provided by the Agency. • The Service Provider's brochures shall indicate the type of information the participants should bring to the workshop and that the workshops, including all the corresponding materials, have been funded through the Iowa Department of Natural Resources. • Each workshop shall accommodate up to 30 participants. • Each workshop and all course material shall be provided to each participant free of charge. Conduct Workshops: • The Service Provider shall conduct twelve (12), five hour continuing education courses using a curriculum approved by the DNR as appropriate and relevant to Grade A operations. • The Service Provider shall use an DNR preapproved instructor for all courses. Reporting: • The Service Provider shall distribute evaluation forms to the participants and encourage them to complete and return them. • Within 30 business days upon completion of each workshop a report shall be submitted to the DNR detailing a workshop evaluation summary along with a list of class participants..	No later than December 31, 2016.

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **5** **DECISION**

TOPIC Notice of Intended Action, Chapter 61, Water Quality Standards, Section 401 Certification of Section 404 Regional Permit (RP 7)

Commission approval is requested for the attached Notice of Intended Action which will amend Chapter 61.2(2) "g" to allow the Department to grant Section 401 Water Quality Certification for the Corps of Engineers (Corps) Regional Permit 7 (RP 7).

Section 401 water quality certifications are required by federal law prior to the issuance of nationwide and regional permits. This rulemaking constitutes certification by the State of Iowa that Army Corps of Engineers' (Corps') nationwide and regional permits, including Regional Permit 7 (RP 7), are consistent with Iowa's water quality standards. All of the listed nationwide and regional permits will be certified through the date of adoption. Without certification, contractors on these projects (e.g., dredging and filling in waters of the United States) would have to seek other means of approval from the State of Iowa, including submitting an individual permit from the Corps for approval. The average time to process a nationwide or regional permit is 2-4 weeks whereas the average time for an individual permit is closer to 2-4 months. This would add substantial delays to these projects.

RP 7 is a general permit issued to authorize work on bridges and road crossings of streams in Iowa and has been used since 1979. The Corps revised RP 7 to include information regarding the 2008 EPA/Corps Mitigation Rule as well as revising some of the conditions to be the same as those that would be included in an individual permit for bridge or road crossings. The 2008 Mitigation Rule is now effective and must be included in the new permit.

The proposed changes contained in this rule-making package will be published in the Iowa Administrative Bulletin and will also be found on the DNR website. The Public Hearing will be held on April 9, 2014 with public comments (oral or written) due by COB on April 18, 2014.

Christine Schwake, Environmental Specialist
Water Quality Bureau
Environmental Services Division

January 27, 2014

ENVIRONMENTAL PROTECTION COMMISSION [567]

Notice of Intended Action

Pursuant to the authority of Iowa Code sections 455B.105 and 455B.173, the Environmental Protection Commission (Commission) hereby gives Notice of Intended Action to amend Chapter 61, "Water Quality Standards," Iowa Administrative Code (IAC). The proposed rule will provide water quality certification pursuant to Section 401 of the federal Clean Water Act (33 U.S.C. Section 1341) for the re-issuance of U.S. Army Corps of Engineers' Regional Permit 7 (RP 7) and its associated conditions. The proposed rule will also recertify all other listed nationwide and regional permits through the effective date of this rulemaking.

Section 404 of the Clean Water Act (CWA) requires a permit from the Corps of Engineers (Corps) for the discharge of dredged or fill materials into the nation's waters. Section 401 of the CWA requires that before the Corps can issue a Section 404 permit, the state water quality agency must certify that the proposed activity will not violate state water quality standards.

Section 404 authorizes the Corps to issue general permits on a state, regional or nationwide basis for categories of activities where such activities will have minimal adverse effects. The Corps has used its general permit authority to issue a number of nationwide and regional general permits for use in Iowa. General permits, including RP 7, can be issued for a period not exceeding five years and a state water quality agency must provide Section 401 certification for a Section 404 general permit before the general permit is valid for that particular state. RP 7 authorizes fill material placed in waters of the United States for bridge and road crossings. RP 7 was initially issued in 1979 and has been re-issued in 1985, 1989, 1995, 1999, 2002, and 2009. The Commission previously provided Section 401 certification for this regional permit. This permit is referenced in 567 IAC 61.2(2)"g."

The Corps issued a public notice of intent to reissue RP 7 with some modifications on July 3, 2013. The Corps revised RP 7 to include information regarding the 2008 EPA/Corps Mitigation Rule[1] as well as revising some of the conditions to be the same as those that would be included in an individual permit for bridge or road crossings. The 2008 Mitigation Rule is now effective and must be included in the new permit. The Corps is incorporating the Iowa Department of Transportation's (IDOT's) standard temporary bridge and road crossing provision into the permit. This proposed rule will provide Section 401 certification for the modified RP 7.

The proposed rule will also recertify all other listed nationwide and regional permits through the effective date of this rulemaking. In addition to the benefits of the adoption of RP 7, the other nationwide and regional permits also benefit regulated entities by speeding approval times and lowering costs. Because only RP 7 has been revised, there are no additional impacts related to the other nationwide and regional permits which are reauthorized by this rulemaking.

Any interested person may file written comments on the proposed rule on or before April 18, 2014. Written comments or questions regarding the proposed rule should be directed to Christine Schwake, DNR, 502 East 9th Street, Des Moines, IA 50319-0034 (phone 515-281-6615 / fax 515-281-8895 / e-mail christine.schwake@dnr.iowa.gov). Oral or written comments will also be accepted at a public hearing to be held on April 9, 2014 at 1:00 PM in the 5th floor East conference room of the Wallace State Office Building, E 9th Street and Grand Avenue, Des Moines, Iowa.

The Corps issued a public notice in July 2013 requesting comments by August 1, 2013 on the revised RP 7. No comments were received during the public notice period. IDOT had the opportunity to review and comment on the draft RP 7 prior to the Corps issuing the public notice with the final version of RP 7.

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[1] On March 31, 2008, U.S. EPA and the Corps issued revised regulations governing compensatory mitigation for authorized impacts to wetlands, streams, and other waters of the United States under Section 404 of the Clean Water Act. These regulations are designed to improve the effectiveness of compensatory mitigation to replace lost aquatic resource functions and area, expand public participation in compensatory mitigation decision making, and increase the efficiency and predictability of the mitigation project review process.

This proposed rule is intended to have a positive impact on jobs and small businesses. The Iowa certification of the Corps nationwide and regional permits will reduce the regulatory burden on permit applicants by allowing these businesses to avoid individual certifications for their projects. The adoption of this proposed rule will allow transportation projects to proceed more rapidly and should therefore allow more projects to be undertaken and completed thus boosting economic activity.

This proposed rule is intended to implement Iowa Code Chapter 455B, division III, part 1.

The following amendments are proposed.

Item #1: Amend paragraph 61.2(2)"g" as follows:

g. This policy shall be applied in conjunction with water quality certification review pursuant to Section 401 of the Act. In the event that activities are specifically exempted from flood plain development permits or any other permits issued by this department in 567–Chapters 70, 71, and 72, the activity will be considered consistent with this policy. Other activities not otherwise exempted will be subject to 567–Chapters 70, 71, and 72 and this policy. United States Army Corps of Engineers (Corps) nationwide permits 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, and 52 as well as Corps regional permits 7, 27, 33, and 34 as ~~promulgated~~ revised through ~~June 20, 2012~~[insert effective date], are certified pursuant to Section 401 of the Clean Water Act subject to the following Corps regional conditions and the state water quality conditions:

(1) Side slopes of a newly constructed channel will be no steeper than 2:1 and planted to permanent, perennial, native vegetation if not armored.

(2) Nationwide permits with mitigation may require recording of the nationwide permit and pertinent drawings with the registrar of deeds or other appropriate official charged with the responsibility for maintaining records of title to, or interest in, real property and may also require the permittee to provide proof of that recording to the Corps.

(3) Mitigation shall be scheduled prior to, or concurrent with, the discharge of dredged or fill material into waters of the United States.

(4) For newly constructed channels through areas that are unvegetated, native grass filter strips, or a riparian buffer with native trees or shrubs a minimum of 35 feet wide from the top of bank must be planted along both sides of the new channel. A survival rate of 80 percent of desirable species shall be achieved within three years of establishment of the buffer strip.

(5) For single-family residences authorized under nationwide permit 29, the permanent loss of waters of the United States (including jurisdictional wetlands) must not exceed 1/4 acre.

(6) For nationwide permit 46, the discharge of dredged or fill material into ditches that would sever the jurisdiction of an upstream water of the United States from a downstream water of the United States is not allowed.

(7) For projects that impact an outstanding national resource water, outstanding Iowa water, fens, bogs, seeps, or sedge meadows, an individual Section 401 Water Quality Certification will be required (Iowa Section 401 Water Quality Certification condition).

(8) For nationwide permits when the Corps' district engineer has issued a waiver to allow the permittee to exceed the limits of the nationwide permit, an individual Section 401 Water Quality Certification will be required (Iowa Section 401 Water Quality Certification condition).

(9) Heavy equipment shall not be used or operated within the stream channel. If in-stream work is unavoidable, it shall be performed in such a manner as to minimize the duration of the disturbance, turbidity increases, substrate disturbance, bank disturbance, and disturbance to riparian vegetation. This condition does not further restrict otherwise authorized drainage ditch maintenance activities (Iowa Section 401 Water Quality Certification condition).

Written verification by the Corps or 401 certification by the state is required for activities covered by these permits as required by the nationwide permits or the Corps, and the activities are allowed subject to the terms and conditions of the nationwide and regional permits. The department will maintain and periodically update a guidance document listing special waters of concern. This document will be provided to the Corps for use in determining whether preconstruction notices should be provided to the department and other interested parties prior to taking action on applications for projects that would normally be covered by a nationwide or regional permit and not require a preconstruction notice under nationwide permit conditions.

_____

Date

_____

Chuck Gipp, Director

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **6** **DECISION**

TOPIC **Contract with Iowa State University for Hydrologic Modeling in the Prairie Pothole Region**

Recommendations:
Commission approval is requested for a one year-service contract with ISU of Ames, IA. The contract will begin on 2/19/2014 and terminate on 1/20/2015. The total amount of this contract shall not exceed $39,000. DNR shall have the option to renew this contract long as this contract and any extensions do not exceed a six-year period.

Funding Source:
This contract will be funded through USFWS Grant # F12AP01057 X2R1 Iowa Wetland Assessment – Phase II.

Background:
Since acquiring LiDAR elevation data, the DNR has been able to effectively map restorable wetland basins across the Prairie Pothole Region of Iowa. However, the DNR lacks the information needed to determine which restorable wetlands offer the greatest water quality benefit if restored.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: scientific modeling and guidance on wetland restoration with the goal of maximizing water quality benefits.

Contractor Selection Process:
ISU was chosen using the University process. ISU was chosen for this project because they have the expertise, experience, and credibility necessary to review the existing scientific research, compile relevant datasets, and perform hydrologic modeling for this landscape in Iowa.

Contract History:
This is a new contract. Section 5.1 Statement of Work from the contract is attached to this brief.

Calvin Wolter for Chris Ensminger
Geologist 3
Iowa Geological and Water Survey Bureau
2/18/2014

Attachment(s): Statement of Work from the Special Conditions for Contract

Section 5 STATEMENT OF WORK

5.1 Statement of Work. ISU shall be responsible to perform the following tasks as described by the Task Milestone Dates set out in the following table:

Obligation	Task Milestone Date
Task 1: Literature Review **Description:** Thorough literature review highlighting what is known about pothole hydrology and surface water quality impacts, and identifying gaps in current knowledge. The emphasis will be on the southern end of the Prairie Pothole Region, where most of the potholes are in row crop agriculture. However, the research base for hydrologic response of these features in this region is relatively small, so the scope will include relevant research on similar features elsewhere.	No later than 3/19/2014
Task 2: Catalog existing data **Description:** A catalog of existing relevant field and monitoring data within the state of Iowa. Existing project partners, including government agency and NGO representatives will be contacted, and responses collected in a standardized format.	No later than 8/1/2014
Task 3: Hydrologic Modeling **Description:** Hydrologic modeling at the microwatershed scale of a minimum of two microwetlands, of both current and "restored" conditions, under a range of precipitation events from small to large, and statistical quantification of the potential impacts of pothole restoration. Weather data will be simulated from local records to ensure a sufficient number of events over this broad range, to improve statistical robustness. Model output analyzed will include: runoff volume, sediment load, nitrate load, phosphorus load. Using high-resolution topography data, runoff volumes will be compared to estimated surface storage in the potholes, so that for each microwatershed simulated, we can quantify the event size that overwhelms the storage capacity of the pothole.	No later than 1/20/2015

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **7** **DECISION**

TOPIC **Contract with the University of Tennessee for Stream Bank Erosion Analyses**

Recommendations:
Commission approval is requested for a two year-service contract with the University of Tennessee of Knoxville, Tennessee. The contract will begin on 2/19/2014 and terminate on 2/19/2016. The total amount of this contract shall not exceed $80,000. DNR shall have the option to renew this contract as long as this contract and any extensions do not exceed a six-year period.

Funding Source:
This contract will be funded through IDOT Grant RB10-014 Bank Stability Assessment Tool.

Background:
Since the early 1900s, accelerated bank erosion in Iowa has resulted in the costly damage to and loss of infrastructure, pipelines, fiber-optic lines, and adjacent farmland with the damages to highway and railroad bridges producing the highest costs. The excessive stream bank erosion observed in Iowa reflects the channel instability stemming from extensive land use change and channelization that occurred throughout much of the 20th century.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: a robust assessment tool that systematically identifies and quantifies the severity of bank erosion near bridge sites at a suitable spatial scale. This assessment tool will also be combined with flow stage information to determine Factors of Safety and bank recession rates to identify areas prone to erosion.

Contractor Selection Process:
The primary investigator (Dr. Thanos Papanicolaou) was chosen using the University process while he was employed by the Iowa Institute of Hydraulics Research at the University of Iowa. The University of Tennessee was chosen for this project because Dr. Papanicolaou is now employed by that institution and working in cooperation with the University of Iowa.

Contract History:
This is a new contract. Section 5.1 Statement of Work from the contract is attached to this brief.

Calvin Wolter
Geologist 3
Iowa Geological and Water Survey Bureau/Environmental Services Division
2/18/2014

Section 5 STATEMENT OF WORK

5.1 Statement of Work. UTK shall be responsible to perform the following tasks as described by the Task Milestone Dates set out in the following table:

Obligation	Task Milestone Date
Task 1: Collect soil information for bridge sites. **Description:** Collect soils samples at bank erosion sites and use penetrometer to assess heterogeneity of soil.	No later than August 19, 2014
Task 2: Quantify critical shear strength for soil samples. **Description:** Soil samples will be analyzed using a Papanicolaou flume to quantify critical shear strength.	No later than January 19, 2015
Task 3: Use CONCEPTS model to quantify Factors of Safety for sites **Description:** Data collected at erosion sites will be used as input to the CONCEPTS model to quantify Factors of Safety for each site.	No later than April, 19, 2015
Task 4: Validate bank erosion rates. **Description:** Bank retreat rates will be verified using channel surveys and erosion pins.	No later than October 19, 2015
Task 5: Provide geomorphological assessment at sites. **Description:** Obtain bed/bank slope, bank height, width, width/height ratio, sinuosity and riparian zone characteristics	No later than June 19, 2015
Task 6: Relate flow characteristics to bank recession rates at sites. **Description:** Obtain flow data from nearest USGS gage and perform flow frequency analysis to assess probability of erosion impacting IDOT infrastructure	No later than June 19, 2015
Task 7: Relate site characteristics to Factors of Safety and erosion rates. **Description:** Data from Tasks 5 and 6 will be correlated with the Factor of Safety and bank recession rates to quantify likelihood and severity of bank erosion at sites. This correlation will be used in the GIS model to assess IDOT sites across the state.	No later than October 19, 2015
Task 8: Provide quarterly and final reports. **Description:** Provide quarterly reports that describe progress made on the project and a final report that summarizes the work done and the outcome.	Quarterly and no later than February 18th, 2016 for final report

Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **8** **DECISION**

TOPIC Revision to State Implementation Plan for Muscatine, Iowa

The U.S. EPA requested that the Department revise the State Implementation Plan (SIP) to address an EPA finding that Iowa's SIP was inadequate to maintain the 2006 24-hour fine particulate (PM2.5) National Ambient Air Quality Standard (NAAQS) in Muscatine. The Commission is requested to approve the SIP revision for preventing future violations of the 24-hour PM2.5 NAAQS in Muscatine. Upon approval of the Commission, the SIP will be forwarded to U.S. EPA for federal notice and approval.

Reason for SIP Revision

On July 14, 2011, U.S. EPA Region 7 found that the Iowa SIP was substantially inadequate to maintain the 24-hour NAAQS for PM2.5 in Muscatine County, Iowa (76 FR 41424). PM2.5 measurements from a PM2.5 monitor located at Garfield School (also referred to as Muscatine High East Campus) show that the site oscillates in and out of attainment with the 24-hour PM2.5 NAAQS. Recent three year design values including 2005-2007, 2007-2009, and 2008-2010 have violated the 24-hour PM2.5 NAAQS.

EPA's finding requires the SIP to be revised to include measures to attain and maintain the 24-hour PM2.5 NAAQS in Muscatine. Specifically, EPA required that the SIP revision include a modeling demonstration showing the reductions needed to attain and maintain the PM2.5 NAAQS, control measures necessary to attain and maintain the PM2.5 NAAQS, and enforceable commitments to adopt and implement contingency measures if the PM2.5 NAAQS is not attained or maintained at the violating monitor.

Affected Sources

The Department determined that three major sources of air pollution in the Muscatine area significantly contribute to predicted (modeled) PM2.5 exceedances of the standard in the vicinity of the Garfield School monitor. These facilities are Grain Processing Corporation (GPC), Muscatine Power & Water (MPW), and Union Tank Car Company (UTLX).

PM2.5 Control Strategy

Control measures were developed based on dispersion modeling and facility operational considerations. These control measures provide for expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions from operations at GPC, MPW, and UTLX. Changes that have been made or will be made at these facilities generally include various combinations of the following:

- Installation of new particulate controls or improvements to existing particulate controls on a number of sources;
- Cessation of operation of various existing equipment;
- Replacement of several existing operations with new, more efficient equipment;
- Regular sweeping and watering of road surfaces;
- Increasing select stack heights; and
- Restricting operation of certain processes.

It is estimated that PM2.5 emissions from these three facilities combined will be reduced by nearly 370 tons per year from 2007 and 2008 actual emissions levels. The majority of the PM2.5 emissions reductions will come from GPC. The controls and other changes that will be implemented at GPC are also estimated to result in significant emissions reductions for several other regulated air pollutants, most notably sulfur dioxide (SO2).

The control strategy is enforceable through an Administrative Consent Order with GPC and issued construction permits with MPW and UTLX. Implementation of control measures at MPW and UTLX will be completed by mid-2014. Due to the scale and complexity of the changes at GPC, GPC has developed a phased implementation schedule that began in 2013 and concludes in December 2016.

Summary of Public Comment Activities

Two public comment periods were conducted for the SIP revision. The first comment period was held from May 21 through June 25, 2013, and included a public hearing in Muscatine on June 24, 2013. Modifications to the SIP revision document were made in response to the comments received during this comment period. The modified SIP revision document was placed on a second public comment period from November 16 through December 20, 2013. A second public hearing was conducted in Muscatine on December 18, 2013. Additional minor changes were made to the SIP revision document in response to comments received during the second public comment period. The responsiveness summaries for the second public comment period is included with the SIP revision document.

Jim McGraw
Environmental Program Supervisor
Program Development Section, Air Quality Bureau
Memo date: January 27, 2014

Iowa
State Implementation Plan

Fine Particulate Matter
Muscatine, Iowa

Iowa Department of Natural Resources
Environmental Services Division
Air Quality Bureau
7900 Hickman Rd Suite 1
Windsor Heights, IA 50324

February 18, 2014

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i. Executive Summary

On July 14, 2011, the U.S. Environmental Protection Agency (EPA) Region 7 found that the Iowa State Implementation Plan (SIP) was substantially inadequate to maintain the 2006 24-hour National Air Quality Standard (NAAQS) for fine particulate matter (PM2.5) in Muscatine County, Iowa (76 FR 41424). PM2.5 measurements from a PM2.5 monitor located at Garfield School (also referred to as Muscatine High East Campus) show that the site oscillates in and out of attainment with the 2006 24-hour PM2.5 NAAQS. Recent three year design values including 2005-2007, 2007-2009, and 2008-2010 have violated the 24-hour PM2.5 NAAQS.

EPA's finding requires the State to revise the SIP and include measures to attain and maintain the 2006 24-hour PM2.5 NAAQS in Muscatine. Specifically, EPA required that the SIP revision include a modeling demonstration showing the reductions needed to attain and maintain the PM2.5 NAAQS, control measures necessary to attain and maintain the PM2.5 NAAQS, and enforceable commitments to adopt and implement contingency measures if the PM2.5 NAAQS is not attained or maintained at the violating monitor.

The Iowa Department of Natural Resources (DNR) determined that three major sources of air pollution in the Muscatine area significantly contribute to predicted (modeled) PM2.5 exceedances of the standard in the vicinity of the Garfield School monitor. These facilities are Grain Processing Corporation (GPC), Muscatine Power & Water (MPW), and Union Tank Car Company (UTLX). The DNR collaborated with these facilities to develop air pollution control measures that will result in expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions from each facility.

Changes that have been made or will be made at these facilities generally include various combinations of the following:

- Installation of new particulate controls or improvements to existing particulate controls on a number of sources;
- Cessation of operation of various existing equipment;
- Replacement of several existing operations with new, more efficient equipment;
- Regular sweeping and watering of road surfaces;
- Increasing select stack heights; and
- Restricting operation of certain processes.

It is estimated that PM2.5 emissions from these three facilities combined will be reduced by nearly 370 tons per year from 2007 and 2008 actual emissions levels. The majority of the PM2.5 emissions reductions will come from GPC. Due to the scale and complexity of the changes at GPC, GPC has developed a phased implementation schedule that begins in 2013 and concludes in December 2016. The controls and other changes that will be implemented at GPC are also estimated to result in significant emissions reductions for several other regulated air pollutants.

Based on the current attaining 24-hour PM2.5 design values in Muscatine, the planned schedule for implementation of the control strategy, and on-going implementation of federal regulations that will continue to reduce regional levels of PM2.5, DNR believes that attainment requirements established by EPA in the SIP call will continue to be achieved.

1. Background

National Ambient Air Quality Standards for PM2.5

Revisions to the fine particulate matter less than or equal to 2.5 microns (PM2.5) National Ambient Air Quality Standards (NAAQS) were published by the U.S. Environmental Protection Agency (EPA) in the Federal Register on October 17, 2006. EPA lowered the 24-hour average standard from 65 micrograms per cubic meter (ug/m3) to 35 ug/m3. The Iowa Department of Natural Resources (DNR) has adopted by reference the revised 2006 standard into 567 Iowa Administrative Code Chapter 28.

On December 14, 2012, EPA revised the annual PM2.5 NAAQS to improve public health protection. EPA strengthened the primary annual average standard first set in 1997 for PM2.5 from 15 µg/m3 to 12 µg/m3. The secondary annual average standard remained at 15 µg/m3.

The primary NAAQS define levels of air quality which are necessary to protect public health. The secondary NAAQS define levels of air quality which protect public welfare from any known or anticipated adverse effects of a pollutant. The PM2.5 NAAQS are shown in Table 1.

Fine particulate matter (PM2.5) consists of solids and liquids with a nominal aerodynamic diameter less than or equal to 2.5 micrometers. Significant impacts on human health and welfare are associated with PM2.5 exposure. An extensive body of scientific evidence shows that exposure to fine particle pollution can cause premature death and adverse cardiovascular effects, including increased hospital admissions and emergency department visits for heart attacks and strokes. Contact with fine particulate pollution also causes respiratory effects, including asthma attacks. The people most at risk from exposure to PM2.5 include people with heart or lung disease (including asthma), older adults, children, and people of lower socio-economic status.

Table 1. National Ambient Air Quality Standards for PM2.5

Pollutant	Averaging Time	Level	Form
Primary	Annual	12 µg/m3	annual mean, averaged over 3 years
	24-hour	35 µg/m3	98th percentile, averaged over 3 years
Secondary	Annual	15 µg/m3	annual mean, averaged over 3 years
	24-hour	35 µg/m3	98th percentile, averaged over 3 years

Muscatine, Iowa

Muscatine has a population of 22,886 people (2010 U.S. Census), and is located along the western shore of the Mississippi River in Muscatine County, adjacent to the border between Iowa and Illinois. Most of the town is situated on low bluffs approximately 45-60 meters above the Mississippi River. Immediately to the south and southwest of the bluffs lies a large flood plain. The plain is approximately 3 meters above the river. Land use in the area of the plain from the bluff line to approximately 2.5 kilometers

south of the bluffs, to approximately 1 kilometer west of the river, consists of industrial development, residential housing, and general commercial use.

Muscatine PM2.5 Air Quality Data

The 24-hour averaged, or daily, PM2.5 standard "…is met when the 3-year average of the 98th percentile of 24-hour concentrations is equal to or less than 35 µg/m3. The computation of this 3-year average of the 98th percentiles of 24-hour concentrations is commonly referred to as the design value and is based on the most recent three years of quality assured data" (Final PM2.5 SIP Call, 76 FR 41424; p 41425).

The Garfield[1] School PM2.5 monitor site (Site ID 191390015) in the city of Muscatine, Iowa, is a neighborhood spatial scale site intended to measure population exposure to ambient PM2.5 concentrations. The site is located approximately 500 meters west of Grain Processing Corporation, a major source of PM2.5 emissions in the area. Land use within two kilometers of the Garfield School monitor site includes residential and commercial properties, other schools, city parks and athletic complexes, day care facilities, and a cemetery.

The site includes a PM2.5 monitor on a daily operating schedule that has measured violations of the 24-hour PM2.5 NAAQS. Historical design values for this site (Table 2) show that the site oscillates in and out of attainment with the 2006 24-hour PM2.5 NAAQS. Recent design values including 2005-2007, 2007-2009, and 2008-2010 have violated the 24-hour PM2.5 NAAQS (see also Figure 1). In addition to the PM2.5 filter samplers on the roof of Garfield School, the DNR also operates a continuous monitor in a trailer on the school grounds. The continuous PM2.5 monitoring data is used for real time reporting of the air quality index, and the filter sampler data is used for establishing NAAQS compliance.

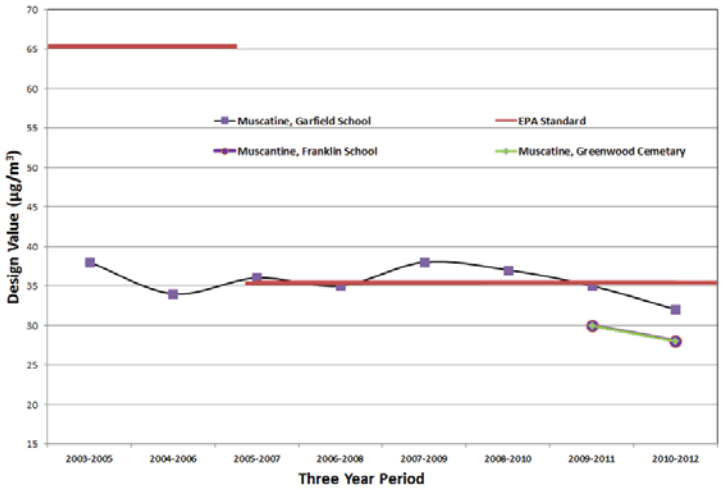
Table 2. Historical 24-hour Averaged PM2.5 Design Values at the Garfield School monitor

Monitoring Years	Design Value (µg/m3)
2003–2005	38
2004–2006	34
2005–2007	36
2006–2008	35
2007–2009	38
2008–2010	37
2009-2011	35
2010-2012	32

The DNR currently operates three other PM2.5 monitor sites in Muscatine. One site is located at Greenwood Cemetery, a second at Franklin School, and a third at Musser Park. Current design values at the Greenwood Cemetery and Franklin School sites are less than the 24-hour PM2.5 NAAQS (Figure 1).

[1] In 2012 the Garfield School Building (which formally housed an elementary school) became the new home of the East Campus of Muscatine High. For monitor location identification purposes, the rooftop monitor site is now referred to as the Muscatine High E. Campus-Rooftop site. For brevity and consistency with the identification of this monitoring site in 76 FR 41424, the school will continue to be referred to as Garfield School in this document.

Figure 1. Muscatine PM2.5 24-hour Design Value Trends



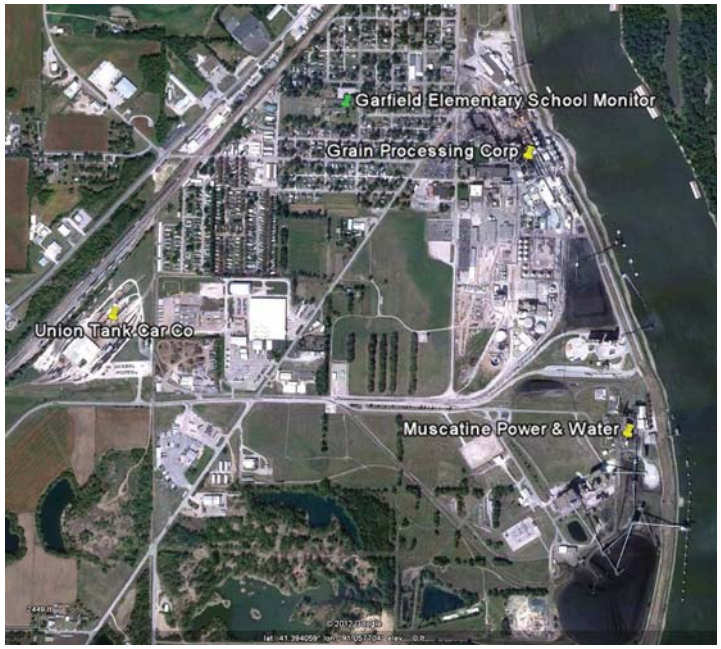
The Musser Park PM2.5 monitor began operation on January 1, 2011. No design value can be determined for this site as only two years of data are available. This monitor recorded 98th percentile values of 30.6 and 25.0 µg/m3 for 2011 and 2012, respectively.

Affected Facilities

There are three major facilities in the Muscatine area that were determined to be significant contributors to predicted (modeled) exceeedances in the vicinity of the Garfield School monitor. (See Attachment A for additional information on the determination of affected facilities.) The facilities that were included in the PM2.5 control strategy are Grain Processing Corporation, Muscatine Power & Water, and Union Tank Car. The location of these facilities relative to the location of the Garfield School monitor is depicted in Figure 2.

The largest source of PM2.5 near the Garfield School monitor is Grain Processing Corporation (GPC). GPC is approximately 500 meters east/southeast of the monitor. GPC is located immediately adjacent to the river between 1500 and 2200 meters south of the bluff line. GPC processes grain into industrial, beverage and fuel-grade ethanol, as well as a variety of grain based food products, industrial products and animal feeds. The GPC facility currently includes nearly 200 PM2.5 emission points, including coal and gas-fired boilers, dryers, coolers and associated material handling and storage equipment.

Figure 2. Affected Facility Locations Relative to Garfield School Monitor



The Muscatine Power & Water (MPW) municipal electrical generating station is located approximately 1.6 kilometers south and east of the monitor. MPW is located immediately adjacent to the river and GPC, approximately 2.5 kilometers south of the bluff line. Primary sources of PM2.5 at MPW include three coal-fired boilers, Units 7, 8, & 9, and associated material handling and storage equipment.

The Union Tank Car Company (UTLX) facility is approximately 1.6 kilometers southwest of the monitor. UTLX supplies and reconditions rail tank cars for use through rental agreements. UTLX is not a major source of PM2.5 but is located near the monitor and was found to contribute to predicted violations of the PM2.5 NAAQS in the area addressed by the PM2.5 control strategy. The primary sources of PM2.5 from UTLX are from the removal of paint from rail tank cars, repair of rail tank cars and spraying new paint on the rail tank cars.

2. SIP Call

The Muscatine area is currently designated as attainment of the 2006 24-hour PM2.5 NAAQS. However, EPA determined that the current State Implementation Plan (SIP) was inadequate to maintain attainment with the 2006 24-hour PM2.5 NAAQS due to the Garfield School PM2.5 monitor recording data violating the standard. A final rule stating that the Iowa SIP was inadequate to maintain the 2006 24-hour average PM2.5 NAAQS in Muscatine County was published in the Federal Register on July 14, 2011 (76 FR 41424) and was effective on August 15, 2011. EPA's authority for this action is found in section 110(k)(5) of Clean Air Act.

This finding, referred to as a 'SIP Call,' requires the state to revise the SIP and include measures to attain and maintain the NAAQS. The SIP revision must include several elements, summarized as:

1) An emissions inventory of sources expected to contribute to the violating monitor,
2) A modeling demonstration showing the reductions needed to attain and maintain the PM2.5 NAAQS,
3) Control measures necessary to attain and maintain the PM2.5 NAAQS,
4) Enforceable commitments to adopt and implement contingency measures if the PM2.5 NAAQS is not attained or maintained at the violating monitor.

The SIP revision was originally due February 15, 2013, consistent with the Clean Air Act which provides up to eighteen months for a state to submit a SIP revision following a finding of inadequacy (CAA 110(k)(5)). DNR used additional time beyond the 18 months to complete administrative processing and submittal of the SIP document.

Emissions Data

The SIP call includes the required submittal of an emissions inventory, consistent with 40 CFR 51.114(a), for all sources and source types of PM2.5 emissions that could be expected to contribute to PM2.5 concentrations at the violating monitor. The average 2007 and 2008 facility-wide actual emissions from the facilities shown to contribute significantly to violations of the 24-hour PM2.5 NAAQS are provided in Table 3. The actual emissions represent direct PM2.5 emissions that were reported by the facilities to the DNR on the annual emissions inventory questionnaires. PM2.5 actual emissions values for many of GPC's emission points were further refined using hourly emission rates derived from a combination of PM10 and PM2.5 stack testing data and information regarding the fraction of PM2.5 in emissions sampled by GPC.

The average actual emissions were used as the baseline for calculating the PM2.5 emissions reductions resulting from implementation of the PM2.5 control strategy. Emissions of PM2.5 precursors that may contribute to violations are accounted for in background concentrations included in the air dispersion model.

The DNR did not identify any other potential emissions sources in the area of the violating monitor, such as area and mobile sources, as contributing significantly to the NAAQS violations. Background concentrations are added to modeled results to account for the regional transport of fine particulate matter and any unidentified local sources such as mobile and area sources not explicitly included in the model.

Table 3. Facility-Wide Actual PM2.5 Emissions

Facility Name	Facility ID	Actual PM2.5 Emissions (tons/year)
Grain Processing Corporation	70-01-004	537.6
Muscatine Power & Water	70-01-011	58.3
Union Tank Car Company	70-01-048	3.0
Total		598.9

Modeling Demonstration

The SIP call requires the DNR to submit a modeling demonstration (consistent with Appendix W to 40 Code of Federal Regulations (CFR) Part 51) showing what reductions will be needed to attain and maintain the PM2.5 NAAQS in Muscatine. The modeling methodology, model option selections and inputs, and model results used by the DNR to identify the reductions needed to attain and maintain the PM2.5 NAAQS in Muscatine are provided in Attachment A of this SIP document.

DNR's proposed modeling methodology and model option selections were provided to EPA in an April 29, 2010 protocol. This protocol was approved with revisions on February 10, 2011. The protocol was amended in February 2013 to address updates in the meteorological data and methodology for accounting for PM2.5 background contributions. The modeling demonstration was completed using the EPA approved protocol with the February 2013 amendment.

Control Measures

Control measures were developed based on dispersion modeling and facility operational considerations. These control measures provide for expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions from operations at GPC, MPW, and UTLX. The control measures at these facilities combine to constitute the PM2.5 control strategy for the Muscatine area.

GPC

Changes that have been made or will be made to sources at GPC to reduce PM2.5 emissions and the associated timelines for implementing the changes are specified in Attachment B. GPC's control measures will be made federally enforceable through the Administrative Consent Order (ACO) in Attachment B and subsequent issuance of air construction permits. When completed, the air construction permits will be submitted as amendments to the PM2.5 SIP for Muscatine.

A summary of control measures being implemented by GPC include:

- New particulate controls or improvements to existing particulate controls on a number of sources;
- Cessation of operation of various existing equipment;
- Replacement of several existing operations with new, more efficient equipment;
- Regular sweeping and watering of road surfaces;
- Increasing select stack heights; and
- Restricting operation of certain processes.

Full implementation of the control measures at GPC will reduce PM2.5 emissions from GPC by an estimated 367.9 tons per year.

Other control measures include restricting public access to the levee that is located between GPC's property and the Mississippi River. Beginning July 14, 2013, GPC will restrict public access to the levee by posting signs warning of restricted access on the north and south fence lines that intersect the levee. The signs will also state that loitering and fishing on the levee in the restricted access areas is prohibited. In-person surveillance of the levee will be conducted by GPC security staff periodically throughout the day with documentation as to surveillance times and locations. The levee requirements are included in Attachment A of GPC's ACO (Attachment B) and will be included in a future permit to ensure on-going implementation and enforceability.

Due to the scale and complexity of the changes at GPC, GPC has developed a phased implementation schedule that begins in 2013 and concludes in December 2016. Information supporting a phased implementation of control measures is provided in Attachment C. Given the extent and number of the modifications being made, the DNR believes that the schedule projected by GPC for implementation of the proposed control measures is realistic and achievable, and will allow for the 24-hour PM2.5 NAAQS to be attained and maintained as expeditiously as possible in the area.

A phased implementation of the control strategy at GPC is supported by 24-hour PM2.5 design values depicted in Figure 1 of this document. The 24-hour design values at the Garfield School monitor have been declining for the last three design value periods. The most recent three year design value (2010-2012) is 32 ug/m3. Design values at Franklin School and Greenwood Cemetery have also shown a decline, with the 2010-2012 design values for both locations at 28 ug/m3. These declines could be attributed to a number of causes. On-going implementation of the control strategy combined with the reduced design values should ensure that future design values stay below the 24-hour PM2.5 NAAQS, eliminating the oscillation of the design values above and below the level of the 24-hour PM2.5 NAAQS as has been seen in the past.

To further reduce emissions in the area, GPC has also voluntarily implemented a corn truck queuing and idling policy. This policy is designed to reduce overall corn truck wait time, and will result in lower emissions of PM2.5 from truck idling. GPC has significant daily corn truck traffic at the facility. As the corn is delivered, each truck is graded by GPC and then proceeds to the unloading stations. Prior to grading as well as prior to unloading, corn trucks can experience wait time at GPC's facility. During the wait time, the corn trucks may be running in an idle mode. Reductions in this idling time will be achieved through scheduling and processing practices described in GPC's policy and the use of more orderly queuing procedures. These voluntary actions on the part of GPC will reduce PM2.5 emissions and emissions of oxides of nitrogen and sulfur dioxide, pollutants which can react in the atmosphere to generate additional PM2.5 emissions from the corn trucks, and alleviate some of the truck traffic congestion in the vicinity of the facility.

MPW

A detailed summary of the control measures for MPW is included in Attachment D. MPW's control measures are made federally enforceable through the issuance of air construction permits (Attachment E).

Control measures being implemented by MPW include:

- Regular watering of road surfaces;
- Paving one unpaved road and water road surfaces;
- Removing lime silo and mixing tank, 3 diesel engines, and wet fly ash truck loading;
- Restricting operation of certain processes;

- Reducing the capacity on the limestone hopper loading and handling systems;
- Installing a roofed enclosure with three sides on the limestone hopper;
- Reducing the size of the coal pile, limestone pile, and synthetic gypsum pile; and
- Increasing the stack height and reconfiguring the coal reclaim handling dust collector and the dust collector for the coal crusher feeders.

Full implementation of the control measures at MPW will reduce PM2.5 emissions from MPW by an estimated 0.7 tons per year.

UTLX

A detailed summary of the control measures for UTLX is included in Attachment F. UTLX's control measures are made Federally enforceable through the issuance of air construction permits (Attachment G).

Control measures being implemented by UTLX include:

- Installation of new particulate controls on a number of emission points;
- Increasing select stack heights; and
- Restricting operation of certain processes.

Full implementation of the control measures at UTLX will reduce PM2.5 emissions from UTLX by an estimated 0.3 tons per year.

PM2.5 Emissions Reductions Summary

The estimated net reductions in PM2.5 emissions from the 2007 and 2008 baseline actual emissions as a result of implementing the control measures at GPC, MPW, and UTLX is summarized in Table 4. The majority of the PM2.5 reductions will come from GPC. The need for GPC to make the largest emissions reductions is consistent with the level of GPC's PM2.5 emissions and model predictions of the magnitude and frequency of GPC's contributions to predicted exceedances.

Table 4. Summary of Estimated PM2.5 Emissions Reductions from Implementation of Control Strategy

Facility	Actual Emissions (tons/year)*	Reductions (tons/year)	Estimated Percent Reduction
GPC	537.6	367.9	68.4%
MPW	58.3	0.7	1.2%
UTLX	3.0	0.3	10.0%
Total	598.9	368.9	61.6%

* Based on average of 2007 and 2008 production data

Co-Benefits of Emissions Reductions at GPC

The controls and other changes that will be implemented at GPC to affect the PM2.5 emissions reductions will also result in emissions reductions (or co-benefits) for several other regulated air pollutants emitted by GPC. Reductions in emissions of these other pollutants is not a requirement of the plan, but is viewed by the DNR as having a positive or beneficial impact on the air quality in Muscatine. The estimated percentage reduction of these air pollutants by 2017 are summarized in Table 5.

Table 5. Estimated Co-Beneficial Emissions Reductions in Emissions from 2011 to 2017 at GPC*

Pollutant	Estimated Percentage Reduction
Sulfur Dioxide (SO2)	84
Hazardous Air Pollutants (HAPs)	82**
Volatile Organic Compounds (VOC)	48
Nitrogen Oxides (NOx)	18
Carbon Monoxide (CO)	13

*These emission estimates were provided by GPC and have not been verified by DNR.
** Reductions in acetaldehyde emissions are included in this percentage reduction. Seventy-one percent of the reduction is due to decreased Hydrogen Chloride (HCl) emissions from the coal-fired boilers.

Projected Attainment Date

The State was required in EPA's SIP call (76 FR 41424) to establish a specific date by which the Muscatine area will attain the 2006 PM2.5 NAAQS. EPA's expectation as stated in the SIP call was that the date for attainment would be the first full calendar year following the implementation of controls. Based on DNR's model predictions of the impact of implementation of the PM2.5 control strategy in Muscatine, the design value trends in Figure 1, and on-going implementation of Federal regulations that will reduce PM2.5 background levels on a regional scale, the DNR believes the attainment requirements established by EPA in the SIP call can be achieved and maintained by December 31, 2017. This projection is contingent on the successful implementation of control strategies on the schedules provided by the facilities.

Contingency Measures

EPA indicated in the SIP Call (76 FR 41424) that the requirement to implement contingency measures would be triggered if the 98th percentile value for the calendar year after completion of implementation of the control strategies, or in any subsequent year, exceeded the 24-hour PM2.5 standard at the Garfield School monitor. The DNR believes that this criteria for triggering local contingency measures does not adequately consider the potential role of regional (non-local) events. Statewide historical 98th percentile PM2.5 monitoring data for the past 10 years was reviewed. The review showed that if the 98th percentile value for one calendar year of monitoring data is used to establish attainment instead of the three-year design value, many communities in eastern Iowa that are not adjacent to direct sources of PM2.5 would have been designated as nonattainment areas for the 24-hour PM2.5 NAAQS (due to regional PM2.5 episodes). The criteria also fail to account for the documented year-to-year variability of meteorological conditions. The annual variability of meteorological conditions is currently accounted for in the form of the 24-hour PM2.5 standard by using a three-year average of 98th percentile values.

Based on these considerations, DNR will use a violation of the 2015-2017 (or any subsequent) PM2.5 design value as measured at the Garfield School monitor to determine whether contingency measures should be implemented. The deadline for the full implementation of contingency measures is as expeditiously as practical, but no later than EPA's 24 month regulatory backstop.

If contingency measures are triggered, then the 98th percentile for any subsequent calendar year following the implementation of contingency measures would be used to determine the need for additional contingency measures. If the 98th percentile for any subsequent calendar year following the implementation of contingency measures is above the level of the 24-hour PM2.5 NAAQS, then additional contingency measures would be implemented. The deadline for the full implementation of the additional contingency measures would be as expeditiously as practical, but no later than 24

months after the second tier of contingency measures is triggered. Like the contingency measures implemented as a result of the design value trigger (first tier trigger), the additional contingency measures implemented as a result of the 98th percentile trigger (second tier trigger) would continue indefinitely and become part of the permanent control strategy for the area.

Ambient Air Quality Monitoring

DNR will maintain the current PM2.5 ambient air monitoring network in Muscatine unless circumstances beyond its control (for example, loss of federal air monitoring funding, or revocation of site access by property owners) force it to abandon air monitoring sites. Air monitoring data from filter sampling sites is available one to two months after the sampling day. Air monitoring from the continuous PM2.5 monitor in Muscatine is available in real time.

Contingency Plans

In the event that the 2015-2017 24-hour PM2.5 design value exceeds the 24-hour PM2.5 NAAQS at the Garfield School monitor, DNR will require the submission of an emissions control program from applicable sources in the area. The determination of sources that may be required to submit an emissions control program will be based on the circumstances that triggered the contingency measures process.

Potential contingency measures which may provide some additional reductions include but are not limited to:

1) Evaluate and install as needed additional control equipment;
2) evaluate and implement as needed changes in stack parameters and stack configuration to improve dispersion of emissions;
3) evaluate and implement as needed additional equipment operating hour or throughput restrictions;
4) evaluate and implement as needed process changes that could reduce particulate formation and emissions;
5) review operations and maintenance procedures to determine if improvements can be made;
6) re-evaluate traffic flow patterns into/out of the facilities, and vehicle miles traveled, to determine if changes that will reduce idling and congestion can be made;
7) re-evaluate material and product unloading, handling, and loading procedures and patterns, etc., to determine if improvements can be made;
8) re-evaluate facility best management practices associated with housekeeping, including cleaning internal and external areas, such as floors, roofs and decks, as necessary to minimize dust to the atmosphere when the facility is receiving, transferring, or loading out materials and products.
9) consider planting vegetation in specific areas to help control dust flow patterns and scavenge fugitive particulate emissions; and
10) identify and implement other improvements that may become evident based on potential source(s) of particulate emissions identified during investigation.

Specific actions that DNR would take to address air quality issues if the area is not meeting the standard are outlined below. A schedule for adoption and implementation of contingency measures from the trigger date (T) is included below (Table 6).

Table 6. Contingency Measures Adoption and Implementation Schedule

Activity	Completion Date (T=trigger date)
1) Evaluate circumstances of trigger; ID sources	T + 1 month
2) Identify additional control measures	T + 2 months
3) Facility(s) submit emission control program	T + 4 months
4) Issue order or permits	T + 6 months
5) Facility(s) implement additional control measures	Within T + 24 months

Activities 2 through 5 would only be accomplished if the evaluation of the circumstances of the trigger unequivocally indicated that PM2.5 emissions from one or more of the three affected sources in the control strategy primarily resulted in the tripping of the contingency measures trigger. The emissions control plan for any facility required to submit a plan (Activity 3) would include the necessary supporting technical information, emissions calculations, construction permit applications (if necessary), and air quality evaluation to make the additional control measures enforceable through the issuance of an order or construction permits. This approach requires each affected facility to create and implement an emissions control plan with targeted control measures appropriate to the circumstances of the situation that triggered the contingency measures.

Activity 4 provides a specific time limit for completion of actions by the DNR. The completion date for full implementation of contingency measures (Activity 5) would be as expeditiously as practicable, but no later than the 24-month backstop specified in the SIP call. The maximum completion date for Activity 5 would allow an affected facility(s) up to 18 months to complete any needed physical modifications to the facility specified in the permits issued under Activity 4.

As outlined below, DNR already has statutory and administrative rule provisions in place that will support the submission and implementation of an emissions control program in an expeditious and timely fashion.

Permitting Mechanisms: The construction of new or modified sources which may impact the maintenance of attainment is regulated by 567 IAC paragraph 22.3(1)"b," which requires that the expected emissions from the proposed source, in conjunction with all other emissions, will not prevent the attainment or maintenance of the ambient air quality standards. Paragraph 567 IAC 22.3(3)"f" establishes additional authority for DNR to establish more stringent emissions standards and to require the installation of additional control equipment for portable equipment to ensure the attainment or maintenance of ambient air quality standards.

DNR has the authority to modify a condition of approval or an existing permit for a major stationary source or an emission limit contained in an existing permit for a major stationary source if necessary to attain or maintain the NAAQS (567 IAC 22.3(5)).

The impact of major stationary sources on ambient air quality is also regulated under regulations at 567 IAC chapter 33 "Special regulations and construction permit requirements for major stationary sources – Prevention of Significant Deterioration (PSD) of air quality."

Emissions Monitoring: The DNR may require specific source monitoring for those sources most significant to attainment of the PM2.5 NAAQS in the area. Emissions monitoring will be accomplished through periodic stack testing, as detailed in the construction permits issued to facilities, and review of

this data by the DNR. These tests will ensure that the emissions limitations in the permits that were used to show modeled attainment of the NAAQS are not exceeded. In addition, recordkeeping and reporting requirements established in the construction permits will provide DNR with a mechanism to monitor and check the operations of the facilities and their emissions sources.

Compliance Verification: Persons responsible for equipment are required to provide to the DNR information necessary to characterize emissions at the facility (567 IAC subrule 21.1(3)). Facilities in the Title V operating permit program, which includes GPC, MPW and UTLX, are required to identify instances of deviations from permit requirements in semi-annual reports to the DNR, including deviations attributable to upset conditions, the cause of the deviations, and any corrective actions or preventive measures taken (567 IAC subrule 22.108(5)). In addition, facilities are required to report and take corrective action in response to incidences of excess emissions (567 IAC chapter 24). Chapter 24 establishes DNR's authority to require the establishment of maintenance plans where a continued pattern of excess emissions indicates inadequate operation or maintenance of equipment.

The provisions of 567 IAC Chapter 25 allow DNR to require monitoring and reporting of emissions for certain equipment. Under the same provisions, DNR can conduct or require the facility to conduct emission tests to determine emissions.

DNR field inspectors have authority to conduct onsite inspections to review the compliance status of the facility (Iowa Code section 455B.103(4)). While conducting an investigation DNR personnel may, at any reasonable time, enter in and upon any private or public property to investigate any actual or possible violation, provided the owner or a person in charge is notified.

3. Administrative Materials

The Administrative Materials discussed below are discussed in the same order as listed in Section 2.1 of Appendix V of 40 CFR Part 51 (Criteria for Determining the Completeness of Plan Submissions).

Submittal Letter

A formal letter of submittal from the Governor of the State of Iowa, requesting EPA approval of the proposed revision to the SIP for the State of Iowa, was included with the SIP submittal.

Evidence of State Adoption

Subsequent to a 30-day public notice and a public hearing, the Iowa Environmental Protection Commission, on February 18, 2014, approved this plan for submittal to EPA as a revision of the State's Implementation Plan for PM2.5 for the Muscatine area. The DNR followed all applicable procedural requirements of the State's laws and constitution in obtaining the adoption of this plan.

Necessary Legal Authority

The DNR is the regulatory agency with primary responsibility for outdoor air quality permitting and compliance activities in the state of Iowa. The DNR's authority is set forth in chapter 455B of the Code of Iowa and implemented through 567 Iowa Administrative Code (IAC) chapters 10 and 20-35, and 561 IAC chapters 2 and 7. The DNR's permitting and compliance programs, and rules, have previously been approved by EPA as part of the State of Iowa's SIP.

The State of Iowa has the necessary legal authority under State statute to adopt and implement this plan. Iowa Code section 455B.133(3) provides that the Iowa Environmental Protection Commission shall "adopt, amend, implement, or repeal emission limitations or standards for the atmosphere of this state on the basis of providing air quality necessary to protect the public health and welfare." The federal National Ambient Air Quality Standard for PM2.5 is adopted by reference at 567 IAC chapter 28. Iowa Code section 455B.134 (9) states that it is the duties of the director to "issue orders consistent with rules to cause the abatement or control of air pollution, or to secure compliance with permit conditions."

Evidence of Public Notice

Notice of the DNR's intention to revise the PM2.5 State Implementation Plan for the Muscatine area and providing a 30-day public comment period and hearing was published for the first draft of the SIP document on May 21, 2013 in the Muscatine Journal. Proof of publication is included in Attachment H. The information was also on the Muscatine Journal website. A list serve notice regarding the public comment period and public hearing was transmitted on May 21, 2013 to over 500 list serve members. A press release on the public hearing was sent out via the DNR's EcoNewsWire on May 23, 2013.

In response to public comments received from the first public comment period, the draft SIP document was revised and a second notice of a 30-day public comment period and hearing was published on November 16, 2013 in the Muscatine Journal. Proof of publication is included in Attachment H. The information was also on the Muscatine Journal website. A list serve notice regarding the public comment period and public hearing was transmitted on November 15, 2013, to over 500 list serve members.

For both public comment periods, an electronic copy of the SIP call document in a pdf format was posted on the DNR's Public Input Webpage at www.iowacleanair.gov. A hardcopy of the SIP call document was made available to the public at the Musser Park Library, 304 Iowa Ave. in Muscatine throughout both public comment periods.

The first public comment period was started on May 21, 2013, and extended through June 25, 2013. The second public comment period was started on November 16, 2013, and extended through December 20, 2013.

Certification of Public Hearing

In accordance with the information provided in the published in the first public hearing notice, a public hearing was conducted at 2 pm on June 24, 2013. The hearing was held at the Muscatine City Hall Council Chambers, 215 Sycamore St. in Muscatine.

In accordance with the information provided in the second published public hearing notice, a public hearing was conducted at 1 pm on December 18, 2013. The hearing was held at the Muscatine County Conservation Board's Environmental Learning Center, 3300 Cedar Street, in Muscatine.

Compilation of Public Comments and the State's Responses

During the first public hearing, the DNR received three oral comments. Eight written comments were submitted to DNR by the close of the public comment period on June 25, 2013. Two comments were received from individuals while the remaining nine comments were from businesses, associations, organizations, and the U.S. Environmental Protection Agency. Copies of all comments received, including a transcription of the oral comments, and the DNR's response to the comments, are available from the DNR upon request.

The DNR received two oral comments during the second public hearing. Five written comments were submitted to DNR by the close of the public comment period on December 20, 2013. One of the written comments was also presented as an oral comment during the public hearing. Two comments were received from individuals, three comments were received from environmental groups or organizations, and one comment was received from the U.S. Environmental Protection Agency. Copies of all comments received, including a transcription of the oral comments, are available from the DNR upon request.

Since many of the issues and concerns relayed in the comments from the second public comment period conveyed identical or similar concepts, the DNR responded to the general topics and issues communicated by the commenters, rather than to individual commenters or comments.

The general comment topics and issues and the DNR's responses to the comments from the second public comment period are provided below.

1) Comment

Three comments were provided regarding future DNR oversight of implementation of the control strategy at the affected sources. One commenter requested that DNR be vigilant in monitoring GPC to

ensure that they follow through with the permit requirements to reduce PM2.5. The same commenter stated that enforcement actions needed to be serious enough to force compliance if emissions in Muscatine are not reduced and maintained within permit levels. Another commenter emphasized that GPC is the largest source of PM2.5 emissions in the area and expressed their concerns that past monitoring of GPC had been lax. A third commenter noted that it will take diligence and oversight, such as regular onsite inspections on DNR's part to achieve the goal of cleaner air sooner rather than later.

Department Response
DNR will be vigilant in monitoring compliance with all applicable requirements for all facilities included in the control strategy. For GPC, a provision in Section V of the Administrative Consent Order (ACO) included in the draft SIP revision document requires GPC to submit written reports semi-annually to the DNR detailing progress toward completion of the requirements of the ACO.

There are administrative rules related to compliance already in place that apply to facilities included in the control strategy. For example, the facilities are required to identify instances of deviations from permit requirements in semi-annual reports to the DNR, including deviations attributable to upset conditions, the cause of the deviations, and any corrective actions or preventive measures taken (567 IAC sub rule 22.108(5)). In addition, the facilities are required to report and take corrective action in response to incidences of excess emissions (567 IAC chapter 24). DNR has authority to require the establishment of maintenance plans where a continued pattern of excess emissions indicates inadequate operation or maintenance of equipment.

DNR will use its existing authority in 567 IAC Chapter 25 as necessary to require monitoring and reporting of emissions from equipment at each facility included in the control strategy. The DNR is requiring performance testing for the emission points listed in Attachment C of the ACO. Performance testing is required to verify compliance with applicable emission limits as specified in Attachment A. To ensure continued compliance with limits in Attachment A; GPC is required to monitor and maintain operations and control equipment per the work practice standards specified Attachment D of the ACO. Similar performance testing and operations and maintenance requirements have also been included as applicable in the air construction permits already issued to MPW and UTLX.

Onsite inspections to review the compliance status of the facility will be conducted by DNR field inspectors under the authority in Iowa Code section 455B.103(4). These inspections will be conducted at a minimum of once every two years.

2) Comment
One commenter expressed concern that the level of pollution leaving the GPC property and entering the levee and Mississippi River air space is so high that the public must be denied access to the area. The commenter stated that public access to the river near the GPC plant needs to be restored as quickly as possible. The commenter stated that it was not acceptable to restrict public access to public land beyond 2016 rather than require the pollution source to comply with the law.

Department Response
Sources are required to demonstrate that their emissions are not exceeding the applicable ambient air quality standards. Ambient air is defined in 567 Iowa Administrative Code (IAC) 20.2 as "…that portion of the atmosphere, external to buildings, to which the general public has access." The definition also

states that "ambient air does not include the atmosphere over land owned or controlled by the source and to which public access is precluded by a fence or other physical barriers."

The levee is under the jurisdiction of the U.S. Army Corp of Engineers. GPC has arranged with the Corp to restrict public access to a limited portion of the levee that runs adjacent to GPC's facility, using the measures specified in the draft SIP revision document. These measures, combined with the physical barrier provided by the river, have been found to be acceptable to preclude public access in similar situations in other locations, when implemented as described in the draft SIP revision document.

Implementation of these measures effectively extends the point where ambient air begins, from the levee to the edge of the river. Air quality modeling predicts that the 24-hour PM2.5 NAAQS will be attained on the river when the control strategy is fully implemented. The levee access restriction is intended to limit public exposure to areas where the air quality modeling predicts higher concentrations. The restriction of access to the levee may be re-evaluated using updated air quality modeling after the control strategy is fully implemented. The restricted access has been made federally enforceable through the addition of provisions in Attachment A of GPC's ACO.

3) Comment
Two comments were received regarding DNR's proposed date for attainment (December 31, 2017). One commenter stated that EPA's SIP call was explicit about the required timeline for implementation of control measures and the required date for attainment/maintenance of the PM2.5 standard. EPA noted in their comments that DNR's proposed attainment date was not consistent with the date identified in EPA's SIP call (76 FR 41424), but recognized that the attainment date identified in EPA's SIP call had passed. EPA will carefully review the information when DNR submits the SIP to EPA for action.

Department Response
EPA's SIP call required the State to establish a specific date in its SIP revision by which the Muscatine area will attain the standard. The date must be as expeditiously as practicable based upon implementation of federal, state, and local measures. EPA stated in the SIP call that they *expected* (emphasis added) that the date for attainment would be the first full calendar year following the required implementation of controls. EPA specified in the SIP call that adopted measures, to achieve reductions as determined through the modeling demonstration, *should* (emphasis added) be implemented no later than two years after issuance of the SIP call (August 15, 2013). Had the controls all been implemented per the SIP call schedule, the attainment date would be December 31, 2014. The SIP call also stated that EPA would establish a *specific date for attainment at the same time it takes final action* (emphasis added) on the State's implementation plan revision in response to the SIP call.

DNR believes that EPA's SIP call language established expectations regarding the timeline for implementation of controls and attainment of the NAAQS but was not explicit in doing so. The SIP call language provides a framework that gives both DNR and EPA flexibility to develop and implement a workable control strategy as expeditiously as practical. DNR's implementation timeline and attainment date in the proposed SIP revision is reasonable, considering the number of facilities involved in the control strategy and the scope of the changes being made at the facilities, and meets the intent and purpose of EPA's SIP call.

DNR's proposed timeline and phased implementation of control measures is supported by recent trends in the monitored PM2.5 values in Muscatine, as provided in Figure 1 of the draft SIP revision document. The 24-hour design values at the Garfield School (East Campus) monitor have been declining for the last

three design value periods. The most recent three year design value (2010-2012) is 32 ug/m^3, which is 3 ug/m^3 below the standard. Design values at Franklin School and Greenwood Cemetery have also shown a decline, with the 2010-2012 design values at both locations at 28 ug/m^3. Full implementation of the control strategy combined with the reduced design values should ensure that future design values stay below the 24-hour PM2.5 NAAQS, eliminating the oscillation of the design values above and below the level of the 24-hour PM2.5 NAAQS as has been seen in the past.

4) Comment

Three commenters expressed concerns regarding the timeline to fully implement the control strategy. One commenter stated that the proposed timeline was unreasonably long given that the technologies to clean the air have been around for years. Another commenter noted that DNR has chosen to pursue the vast majority of PM2.5 reductions from GPC. The commenter suggested that DNR should look for reductions elsewhere, including potentially sources outside of the county, if GPC's control measures are truly not capable of being implemented until December 31, 2016. EPA requested that DNR enhance the justification regarding the delay in the implementation of controls with further details and explanation to demonstrate that the proposed control strategy is being implemented as expeditiously as practicable.

Department Response

The three facilities included in the control strategy are using proven and accepted technologies and techniques to affect the necessary reductions in PM2.5 impacts. The design, engineering, procurement, and construction work needed to affect the changes, especially at GPC, could not all be accomplished in the time period provided in the SIP call. A phased implementation schedule was developed to address these limitations. Control measures are being implemented as soon as possible at each of the three facilities.

As noted in the draft SIP document, GPC has the highest PM2.5 emissions levels. Therefore, the largest emissions reductions occur from control measures being implemented at GPC. These measures require GPC to undertake significant construction projects that will be accomplished as expeditiously as practical through 2016. It is important to note that GPC's control measures are being implemented in phases starting in 2013 and concluding in 2016. GPC is not waiting until 2016 to implement all control measures. Information supporting GPC's phased implementation of control measures was provided in Attachment C of the draft SIP document. Additional details that support the timeline for the phased implementation of GPC's control measures have been added to Attachment C of the final SIP revision document to further detail timing constraints.

Consideration of other sources for PM2.5 reductions was addressed in the early phases of the modeling demonstration (Attachment A of the draft SIP document). All major sources (38 total) located within 50 kilometers of the Garfield School monitor were evaluated for inclusion in the control strategy development. The sources located outside of a 5 kilometer radius of the Garfield School monitor were predicted to have impacts of less than the PM2.5 significant impact level of 1.2 ug/m^3. This result indicates that PM2.5 reductions from sources located outside of the county would not significantly mitigate the PM2.5 levels monitored at Garfield School. Emissions from these sources were considered to be accounted for through the inclusion of a PM2.5 background concentration in the model results.

5) Comment

One comment was submitted stating that DNR should pursue greater reductions at MPW. Specifically, the commenter asked whether DNR evaluated the impact of requiring a switch to alternative fuel

sources and whether a switch would result in attainment/maintenance of the PM2.5 standard sooner than under the current proposal.

Department Response

Control measures were developed for the control strategy based on emission impacts on ambient air and facility operational considerations. Each facility was responsible for identifying the ambient air impact reduction measures that they could implement to address their contributions to the PM2.5 exceedances predicted in the dispersion modeling.

Many of the PM2.5 emissions sources at MPW, including the Unit 7, 8, and 9 boilers (EPs 70, 80, and 90, respectively), were already well controlled due to existing permit conditions that were in place to limit emissions of PM10. Dispersion modeling indicated the need to reduce the ambient air impacts of PM2.5 emissions from other sources at the facility. This approach led to a smaller overall PM2.5 emissions reduction but significantly reduced PM2.5 impacts from several sources that MPW identified as necessary to address their contributions to the predicted exceedances.

Modeling indicates that the maximum 24-hour PM2.5 impacts from MPW under the control strategy will be reduced by nearly 35% (approximately 13 ug/m^3) from baseline (pre-control) concentration levels. For perspective, the worse-case predicted 24-hour PM2.5 impacts from EPs 70, 80, and 90 combined is approximately 3 ug/m^3 when firing coal. These results show that PM2.5 emissions from the coal fired boilers have a low impact in the local area. MPW has identified control measures that address their contributions to predicted exceedances within the time frames established in the SIP call. There is no technical or regulatory basis to require that MPW switch to an alternate fuel source.

6) Comment

DNR needs to provide more details regarding GPC's extended timeline for compliance with the Boiler MACT. If switching to alternate fuel sources at GPC can be accomplished sooner than controlling coal firing, then the SIP revision needs to require that control measure, rather than presenting it as an option for GPC to evaluate.

Department Response

Under 40 CFR Part 63, subpart DDDDD (Boiler MACT), GPC has until January 31, 2016, to comply with the requirements of this standard. Modeling results indicate that the PM2.5 emissions reductions from the boilers as a result of implementation of the Boiler MACT will do little to reduce PM2.5 levels in the area.

Emissions from the boilers at GPC are emitted from the EP1 stack, also referred to as the GEP stack. PM2.5 emitted from this 219 foot high stack undergoes significant dispersion and yields low surface-level PM2.5 concentrations. Dispersion modeling of the PM2.5 emissions from EP1 at the pre-control strategy emission rates showed that EP1's maximum 24-hour ambient concentration was 3.98 ug/m^3. For perspective, the pre-control strategy maximum predicted 24-hour impact of all PM2.5 emissions from GPC overall was 98.4 ug/m^3. EP1 is one of 192 emissions points included in the GPC control measures. Reducing the EP1 PM2.5 emissions by approximately 254 tons as specified in the control strategy results in reducing the maximum 24-hour concentration to 1.74 ug/m^3.

These results show that while the PM2.5 emissions from EP1 are high, they have a low impact in Muscatine. Given this analysis, there is limited benefit for maintaining the 24-hour PM2.5 standard in Muscatine to require GPC to provide more details regarding their plans for compliance with the Boiler MACT or to require that GPC switch to an alternate fuel source.

7) Comment

Two commenters expressed concerns regarding the trigger period proposed by DNR for implementation of the contingency measures and the lack of specific contingency measures in the draft SIP revision. EPA noted in their comments that DNR's proposed tiered trigger process to implement contingency measures is inconsistent with EPA's SIP call and that EPA will carefully review the information when DNR submits the SIP to EPA for action. Another commenter said that DNR must revise the plan to include a one year trigger period.

EPA requested that DNR provide specific information about the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific time limit for action by the DNR. EPA describes adequate contingency measures as the implementation of emissions reductions to address air quality issues, not simply a commitment to study the reasons why the contingency measures were triggered. Another commenter noted that the SIP revision does not include an enforceable commitment to implement contingency measures.

Department Response

Clean Air Act section 175A(d) provides that "Each plan revision submitted… contain such contingency provisions as the Administrator deems necessary to assure that the State will promptly correct any violation of the standard which occurs…" The approach to contingency measures that was deemed necessary by EPA in this instance were included in EPA's SIP call. Specifically, EPA required that the SIP revision contain an enforceable commitment to adopt and implement sufficient contingency measures, *once triggered* (emphasis added), in an expeditious and timely fashion that is comparable and analogous to the requirements for contingency measures in section 175A(d). To accomplish this, EPA deemed that the SIP revision *should* (emphasis added) clearly identify measures which *could be* (emphasis added) timely adopted and implemented, a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. Regarding the schedule for adoption and implementation, the SIP call specifies that it should be as expeditious as practicable, but no longer than 24 months after being triggered.

No objections were submitted by EPA to the DNR regarding the technical validity of DNR's proposed two tier trigger for contingency measure implementation. DNR maintains that the design value for the 24-hour PM2.5 NAAQS should be used to account for the historical role of regional PM2.5 events on design values and the year-to-year variability of meteorological conditions. Use of the 98th percentile value for one year of monitoring data does not adequately account for these factors. The two tier trigger approach allows for the triggering of contingency measures on the same time schedule that would have been applicable with a trigger based only on the 98th percentile value for the calendar year after complete implementation of the control strategies. With these considerations, the two tier trigger approach is "comparable and analogous" to the requirements in the SIP call and in section 175A(d) of the Clean Air Act.

The revised draft SIP revision clearly identified six measures which could be timely adopted and implemented in the event that the need for contingency measures was triggered. There was no requirement in the SIP call (or Clean Air Act) to identify specifically which options would be implemented on which emissions points at one or more of the three affected facilities. This step would occur during the development of the emissions control plan described in the "Contingency Plans" section of the revised draft SIP revision document.

In an effort to provide more specificity regarding what contingency measures may be considered during the development of the emissions control plan, the draft SIP revision document has been updated to include an expanded list of contingency measures that may be considered. Potential contingency measures which may provide some additional reductions include but are not limited to:

1) Evaluate and install as needed additional control equipment;
2) evaluate and implement as needed changes in stack parameters and stack configuration to improve dispersion of emissions;
3) evaluate and implement as needed additional equipment operating hour or throughput restrictions;
4) evaluate and implement as needed process changes that could reduce particulate formation and emissions;
5) review operations and maintenance procedures to determine if improvements can be made;
6) re-evaluate traffic flow patterns into/out of the facilities, and vehicle miles traveled, to determine if changes that will reduce idling and congestion can be made;
7) re-evaluate material and product unloading, handling, and loading procedures and patterns, etc., to determine if improvements can be made;
8) re-evaluate facility best management practices associated with housekeeping, including cleaning internal and external areas, such as floors, roofs and decks, as necessary to minimize dust to the atmosphere when the facility is receiving, transferring, or loading out materials and products.
9) consider planting vegetation in specific areas to help control dust flow patterns and scavenge fugitive particulate emissions; and
10) identify and implement other improvements that may become evident based on potential source(s) of particulate emissions identified during investigation.

Additionally, a schedule and procedure for adoption and implementation of the contingency measures has been added to the "Contingency Plans" section of the draft SIP revision document in an effort to provide specific actions that DNR would take to address air quality issues if the area is not meeting the standard. A schedule for adoption and implementation of contingency measures from the trigger date (T) is included below.

Activity	**Completion Date (T=trigger date)**
1) Evaluate circumstances of trigger; ID sources	T + 1 month
2) Identify additional control measures	T + 2 months
3) Facility(s) submit emission control program	T + 4 months
4) Issue order or permits	T + 6 months
5) Facility(s) implement additional control measures	Within T + 24 months

Activities 2 through 5 would only be accomplished if the evaluation of the circumstances of the trigger unequivocally indicated that PM2.5 emissions from one or more of the three affected sources in the control strategy primarily resulted in the tripping of the contingency measures trigger. The emissions control plan for any facility required to submit a plan (Activity 3) would include the necessary supporting technical information, emissions calculations, construction permit applications (if necessary), and air quality evaluation to make the additional control measures enforceable through the issuance of an order or construction permits.

This approach requires each affected facility to create and implement an emissions control plan with targeted control measures appropriate to the circumstances of the situation that triggered the contingency measures. As referenced in "Contingency Plans" section of the draft SIP revision document, the statutory and administrative rule requirements pertaining to permitting mechanisms, emissions monitoring, and compliance verification are already in place to support the submission and implementation of an emissions control program in an expeditious and timely fashion.

Activity 4 provides a specific time limit for completion of actions by the DNR. The completion date for full implementation of contingency measures (Activity 5) would be as expeditiously as practicable, but no later than EPA's 24 month backstop specified in the SIP call. The maximum completion date for Activity 5 would allow an affected facility(s) up to 18 months to complete any needed physical modifications to the facility specified in the permits issued under Activity 4.

DNR believes that these changes to the SIP revision document provide additional specificity regarding potential contingency measures, a schedule and procedure for adoption and implementation, and a specific time limit for action by the DNR, in the event that contingency measures are triggered.

8) Comment

The GPC ACO includes language in Sections III and VI that EPA finds unacceptable, and if the language is included with DNR's SIP submission to EPA, will affect the approvability of the SIP. Section III "Statement of Facts" states that IDNR and GPC are entering into the administrative consent order "pursuant to an understanding that EPA will and does approve IDNR's SIP." Section VI "Failure to Accept Proposed PM2.5 SIP" states, "...if for any reason EPA does not accept and approve all the terms and provisions of the PM2.5 SIP call within 22 months of the execution of this administrative consent order, GPC or DNR may withdraw from the terms and conditions of this administrative consent order, and upon such written withdrawal, the terms and conditions of this administrative consent order shall be null and void in their entirety and for all purposes." By including this language in the ACO, the ACO does not contain permanent and enforceable measures as required by CAA § 110(a)(2)(A) and precludes public comment. Further, the ACO circumvents the EPA's SIP review process which includes a review of completeness, adequacy of the control strategy, enforceability, how the state intends to attain and maintain the standard, and provides an opportunity for public comment.

Another commenter noted that Section V of the order contains a provision which requires GPC to submit construction permit applications within 90 days of signing the order. However, the order states that applications for EP1, EP143, EP158, and EP199 must be submitted within 90 days of a final resolution of *State of Iowa vs. Grain Processing Corporation*, which is currently pending in the Iowa District Court for Muscatine County. Those four emission points represent the vast majority of PM 2.5

reductions under the entire plan. The administrative order negates the certainty and enforceability which it was supposed to provide by stating that GPC shall take action on these emission points at some future, undetermined date.

Department Response

The GPC ACO is intended to be an intermediate instrument to continue implementation of GPC's portion of the PM2.5 control strategy in Muscatine until construction permits can be issued for all affected emission points at GPC. Construction permit applications have been submitted to DNR for the majority of the emission points included in GPC's control strategy. Issuance of the construction permits cannot proceed until resolution is reached in the *State of Iowa vs. Grain Processing Corporation* suit. DNR anticipates that resolution of the suit and issuance of the construction permits will occur well within 22 months of the execution of the ACO, removing any doubts about the ability of the state to ensure that GPC's control measures and timeline for implementation are "permanent."

EPA has had considerable involvement and oversight to date in the development of both the overall control strategy and the conditions included in the GPC ACO. DNR believes that the control strategy will ensure on-going attainment of the 24-hour PM2.5 NAAQS in Muscatine when fully implemented and is fully enforceable through GPC's ACO and the construction permits already issued to MPW and UTLX. EPA provided no other substantive comments on the draft SIP revision that would affect approvability of the SIP revision and appears to support the SIP revision otherwise. When the SIP revision is submitted to EPA in February 2014, EPA will have until December 2015 (22 months) to approve the SIP under the regulatory review and approval timelines. This time period exceeds the 18 months provided for in Section 110 of the Clean Air Act. Section 110 provides 6 months for a completeness finding and another 12 months for EPA to act on the SIP submission. Implementation of the control strategy will continue during the 22 month time period. The MPW and UTLX control strategies will be fully implemented during this time period and the majority of the control measures at GPC will have been implemented in this time period.

DNR believes that the practical aspects of the implementation of overall control strategy as presented above should alleviate concerns regarding the full completion of the control strategy implementation. However, given EPA's concern over the approvability of the SIP due to language in Sections III and VI of the GPC ACO (regarding EPA's approval of all terms and provisions of the PM2.5 SIP call within 22 months of the execution of GPC's ACO), DNR will request that this provision of the ACO not be included in the SIP revision request when the final SIP revision document is submitted to EPA.

Regarding application submittal dates for EP1, EP143, EP158, and EP199, it should be noted that applications for all of these emission points have already been submitted to DNR. The construction permit application for EP199 is considered complete at this time. Pending the resolution of the *State of Iowa vs. Grain Processing Corporation* suit, GPC will provide the appropriate updates to the construction permit applications for EP1, EP143 and EP158.

As provided for in Attachment A of GPC's ACO, the construction/operational modification completion dates for EPs 1, 143, 158, and 199 are not until 2016. DNR believes that sufficient time is available to

settle the suit, obtain updated construction permit applications, review and issue construction permits, and complete any necessary modifications at GPC prior to applicable completion dates. Regardless, the construction/operational modification completion dates for these emission points are part of the enforceable control strategy and will have to be met by GPC.

Process for SIP Revisions

Facilities included in the control strategy may request modification of construction permits or administrative consent orders included in the SIP by written application to the DNR as provided for in 567 IAC 22.7. Written application for modifications to construction permits or administrative consent orders shall include all necessary construction permit application forms. The forms shall be completed in their entirety. Modifications to construction permits may result in the requirement for the affected facility to complete a modeled attainment demonstration using approved dispersion modeling techniques, if requested by DNR. All construction permit modifications shall be placed on a 30-day public notice prior to approval of the modification. Once issued, the modified permits or administrative consent orders will be submitted to EPA for incorporation into the SIP and are subject to federal approval.

Attachment A. Modeling Demonstration

Dispersion Modeling Demonstration for the Muscatine PM2.5 SIP

Project Purpose and Scope

On July 14, 2011 EPA Region 7 found that the Iowa State Implementation Plan (SIP) was substantially inadequate to maintain the 2006 24-hour National Air Quality Standard (NAAQS) for fine particulate matter (PM2.5) in Muscatine County, Iowa. As part of this finding, the Iowa Department of Natural Resources (DNR) is required to submit a modeling demonstration consistent with Appendix W to 40 CFR Part 51 showing what reductions will be needed to attain and maintain the PM2.5 NAAQS in Muscatine. This section outlines the modeling methodology used by the DNR to identify the reductions needed to attain and maintain the PM2.5 NAAQS in Muscatine.

Model Selection and Options

Air Quality Model Selection: The dispersion model used for this analysis was the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD). The most current version of AERMOD available at the time was used for each step in the development of the SIP modeling demonstration. All analyses were conducted with EPA's regulatory default options. The final cumulative PM2.5 emissions control strategy modeling was conducted using AERMOD version 12345.

Extent of Receptor Grid: The 2008 Technical Support Document developed by the DNR to evaluate proposed PM2.5 non-attainment boundaries in Muscatine County strongly suggested that the Grain Processing Corporation (GPC) had a controlling role in causing or contributing to the monitored exceedances in Muscatine, therefore emissions from GPC were used to determine the extent of the receptor grid for the PM2.5 SIP modeling. This initial modeling used GPC's 2006-2008 PM2.5 actual emissions, 2006-2008 meteorological data, and a receptor grid with 1-kilometer receptor spacing that extended 50 kilometer from the GPC facility. Based on this initial analysis, it was determined that the grid should extend approximately five kilometers from the GPC property boundary. The final grid used in the remaining modeling for the PM2.5 emissions reduction strategy was extended to include the full property boundaries of all facilities with PM2.5 emissions included in the modeling for the emissions reduction strategy.

Receptor Grid Spacing: The receptor grid spacing used in the emissions reduction strategy analysis was consistent with Iowa's guidelines for both PSD and non-PSD modeling, with 50-meter spacing along all facility property boundaries. The one exception to this was the HNI HON Downtown facility where no facility boundary was evaluated. This facility is located in downtown Muscatine, consists of several buildings and it was unclear at the time where the property boundary was located. All area outside of the buildings was considered as ambient air. The 50-meter grid spacing extends from the GPC property

boundary 0.5 kilometers, 100-meter spacing out to 1.5 kilometers, 250-meter spacing out to 3 kilometers and 500-meter spacing beyond 3 kilometers.

Terrain Elevations: The most recent version of AERMAP was used to import terrain and source elevations from the National Elevation Dataset (NED) in North American datum 1927. Facilities located along the Mississippi River have a levee that is approximately 9 meters higher than the normal river level. Elevations of receptors located along this levee are reflected in the elevations derived from the NED.

Downwash: All building downwash analyses were conducted using the most recent version of EPA's Building Profile Input Program with Plume Rise Enhancements (BPIP-Prime).

Meteorological Data: For all stages of development of the PM2.5 emissions reduction strategy modeling, the most recent and representative meteorological data were used. At the time that the initial modeling was conducted to determine the extent of the grid, develop the emissions inventory, and for the baseline modeling analyses, the Cedar Rapids meteorological station had been determined to be representative for the modeling domain. A detailed representivity analysis to support the use of the Cedar Rapids meteorological data is included in Appendix A of this modeling demonstration . These analyses were conducted using the surface station data from Cedar Rapids and upper air data from Davenport and used consecutive years from the most recent, readily available 5-year period (2004 – 2008), per section 8.3.1.2 of 40 CFR Part 51 Appendix W.

Meteorological data for the entire state was revised in November 2011 and again in January 2013. The revised November 2011 meteorological data used the most recent, readily available five-year period (2005 – 2009), included new sites, incorporated the recent upgrades to AERMET, and included one minute wind data. Use of new sites and additional refinement of the representativeness of the data resulted in a change from the Cedar Rapids to the Davenport meteorological data set for the PM2.5 emissions reduction strategy modeling. The representivity analysis to support the switch to the Davenport data is included as an addendum to Appendix A of this modeling demonstration. This meteorological data was re-processed in January 2013 due to a new version of AERMET released by EPA on December 17, 2012. The final cumulative PM2.5 emissions reduction strategy modeling was conducted using the 2005 – 2009 Davenport meteorological data processed with AERMET version 12345.

Modeling Methodology

Phased Analysis: Although the EPA finding that required this analysis occurred in June of 2011, the initial modeling to develop an emissions reduction strategy for Muscatine began in September 2009. Preliminary baseline modeling was conducted between 2009 and 2011 to determine the size of the receptor grid, which facility emissions to include in the analyses, and then determining which of those facilities would be part of the emissions control strategy. This baseline modeling was further revised in 2011.

Following the preliminary analyses, a three phased analysis to develop the final emissions control strategy was conducted between 2011 and 2013. Phase I required individual facilities included in the emissions reduction strategy to submit a model demonstrating that potential PM2.5 emissions from their facility would not cause highest, first-high predicted concentrations over 35 $\mu g/m^3$. For Phase II the DNR combined these individual facility-wide modeling analyses into a cumulative model along with the emission rates from the other facilities in the Muscatine SIP analysis. The other facilities included in the SIP analysis were evaluated at emissions that reflect their highest PM2.5 emission rates when operating at maximum capacity. Phase III mitigated the predicted exceedances and determined the reductions necessary to attain and maintain the 24-hour PM2.5 NAAQS in Muscatine.

Inventory Development: A modeling analysis was conducted for all major facilities located within 50 kilometers of the Muscatine ambient air monitor at Garfield School (also referred to as Muscatine High School East Campus) to develop the inventory of sources to include in the Muscatine PM2.5 SIP modeling. Any major source with a significant impact (1.2 $\mu g/m^3$ for the 24-hour averaging period) within the five kilometer receptor grid was included in the PM2.5 SIP modeling.

These facilities were evaluated at their actual PM2.5 emission rates based on the average of their 2007 and 2008 emissions data as reported by the facilities in their annual Title V Emissions Inventory Questionnaires. Fugitive emissions from the facilities located within the five kilometer receptor grid were also included in the evaluation. The major facilities that were evaluated for inclusion in the SIP modeling are listed Table 1 along with their locations as listed in their Title V operating permits.

Differing methods of evaluation were used for the facilities located within and outside of Muscatine. Major facilities located within Muscatine were modeled using their actual stack parameters and actual site layouts. Although the site locations for MidAmerican Louisa Generating Station, SSAB/Multiserve and Central Iowa Power Coop are listed in their Title V permits as being located in Muscatine, in actuality they are located outside the city of Muscatine: MidAmerican Louisa Generating Station is located approximately 9.5 kilometers to the south of the Garfield School monitor. SSAB/Multiserve and Central Iowa Power Coop are located over 20 kilometers to the northeast of the monitor. Major facilities located outside the city of Muscatine were evaluated with emissions exhausting from the one stack determined to have the highest PM 2.5 emission rate. This represents an acceptable approximation for more distant sources, and allowed for more reasonable model run times.

All major facilities located outside the city of Muscatine had highest, first-high predicted impacts below the significant impact level of 1.2 $\mu g/m^3$. The highest predicted impact from any one of these major facilities was 0.47 $\mu g/m^3$ from Central Iowa Power Coop. Therefore the major facilities located outside of Muscatine were not included in the PM2.5 SIP modeling. Emissions from the major facilities located outside of Muscatine are considered to be accounted for in the inclusion of a background concentration to the model results.

Table 1. Major Facilities within 50 Kilometers of the Garfield School Monitor

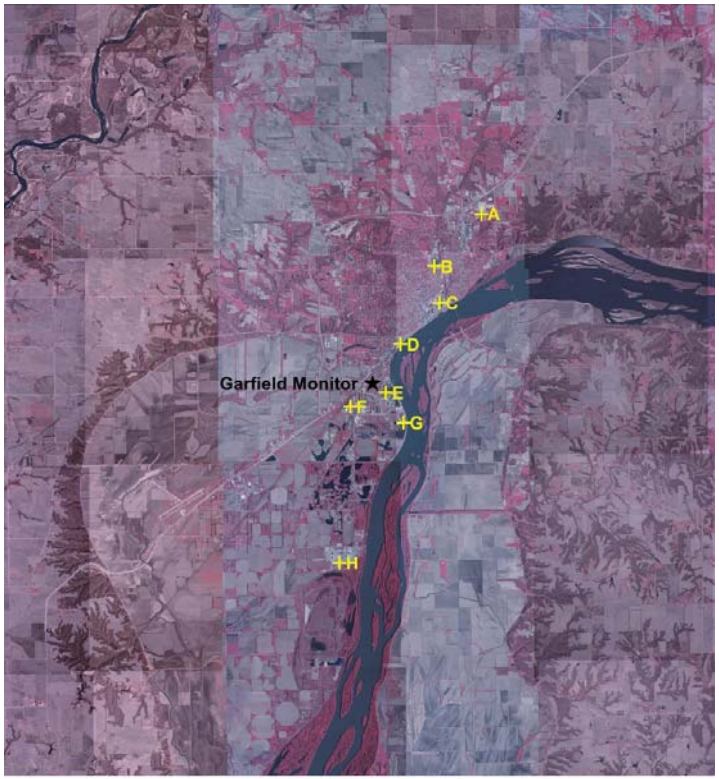
Facility	Site City
Gerdau Ameristeel US Inc.	Wilton
Xerxes Corporation	Tipton
United States Gypsum	Mediapolis
IAC Iowa City, LLC	Iowa City
University of Iowa - campus	Iowa City
University of Iowa - power plant	Iowa City
Enterprise NGL Pipeline	Iowa City
Loporex, Inc.	Iowa City
Iowa City Sanitary Landfill	Iowa City
MidAmerican Energy Corporation -Coralville turbines	Coralville
Magellan Pipeline Company, LP	Coralville
Natural Gas Pipeline Co. of America - Columbus Junction	Columbus Junction
Natural Gas Pipeline Co. of America - Letts	Letts
ALCOA, Inc.	Riverdale
Blackhawk Foundry & Machine Company	Davenport
Linwood Mining & Minerals Corporation	Davenport
Nichols Aluminum	Davenport
Nichols Casting	Davenport
John Deere Davenport Works	Davenport
Scott County Landfill	Davenport
Sivyer Steel	Bettendorf
MidAmerican Company – Riverside Station	Bettendorf
Arch Mirror North	Bettendorf
Veolia Water NA	Bettendorf
Lafarge North America, Inc.	Buffalo
ACO YP, Inc	Riverdale
ACH Foam Technologies, LLC	Washington
MidAmerican Energy Company - Louisa Generating Station	Muscatine
Grain Processing Corporation	Muscatine
SSAB/Multiserve	Muscatine
Central Iowa Power Coop – Fair Station	Muscatine
H J Heinz Company, LP	Muscatine
HNI Allsteel Muscatine Components	Muscatine
HNI HON Downtown	Muscatine
McKee Button Company	Muscatine
Monsanto Company	Muscatine
Muscatine Power & Water	Muscatine
Union Tank Car Company	Muscatine

All major facilities located within the city of Muscatine had highest, first-high predicted impacts greater than the PM2.5 significant impact level of 1.2 $\mu g/m^3$ and therefore were included in the PM2.5 SIP modeling analysis. These eight facilities and their highest predicted impacts within the five kilometer grid are listed in Table 2. The relative locations of the major facilities in Muscatine to the Garfield School monitor are shown in Figure 1.

Table 2. Facilities Predicted to have at least a Significant Impact (SIL = 1.2 $\mu g/m^3$)

Facility	H1H impact within the grid
Grain Processing Corporation (GPC)	98.4
H J Heinz Company , LP	1.7
HNI Allsteel	2.5
HNI HON Downtown	21.6
McKee Button Company	4.0
Monsanto Company	39.6
Muscatine Power & Water (MPW)	38.5
Union Tank Car Company	93.4

Figure 1. Location of Major Facilities in Muscatine



A - HON Allsteel
B - H J Heinz
C - HON Oak Steel
D - McKee Button
E - Grain Processing Corporation
F - Union Tank Car
G - Muscatine Power & Water
H - Monsanto

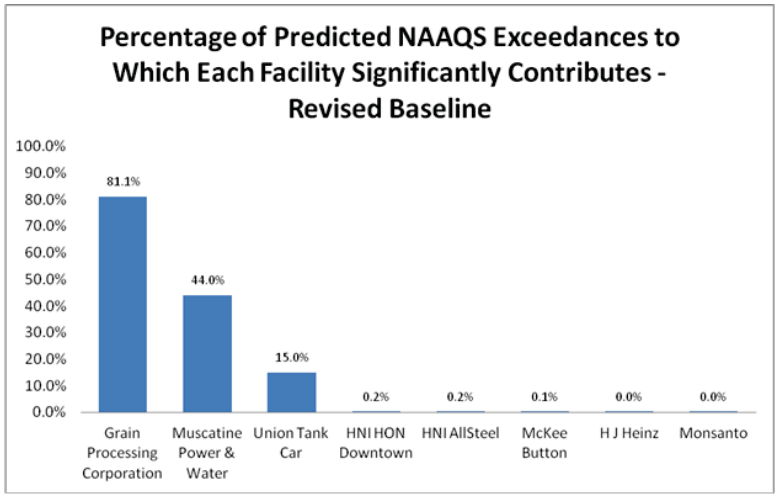
Preliminary Baseline Modeling: The eight facilities determined to be part of the PM2.5 SIP analysis were evaluated to determine which of these facilities should be part of the PM2.5 emissions control strategy. Individual modeling analyses were conducted for each of the eight facilities identified to be included in the PM2.5 SIP modeling using their actual emission rates. The results from these individual analyses were combined in a Microsoft Access database to determine the percentage of predicted NAAQS exceedances to which each facility significantly contributed. The preliminary baseline modeling results indicated that four facilities (GPC, MPW, Union Tank Car, and Monsanto) each had a significant contribution to at least one percent of the predicted 24-hour NAAQS exceedances.

Revised Baseline Modeling: The four facilities identified as having a significant contribution to at least one percent of the predicted PM2.5 NAAQS exceedances in the preliminary baseline analysis were contacted to inform them of the initial baseline modeling results. The DNR modeling files and emissions data was provided to allow the facilities to review the DNR data including the DNR determined potential and actual PM2.5 emission rates for their facilities. Revised information was provided by these four facilities. In addition, updated information was provided for the two HNI facilities (Allsteel and HON Downtown).

The baseline modeling analyses was re-accomplished with the revised data and the percentage of predicted NAAQS exceedances to which each facility significantly contributed was determined. A chart depicting the percent of NAAQS exceedances that each facility had a significant contribution to was developed. The revised baseline analysis indicated that GPC, MPW and Union Tank Car each had a significant contribution to at least one percent of the predicted 24-hour NAAQS exceedances. Monsanto had a significant contribution to less than 0.005 percent of the predicted 24-hour NAAQS exceedances, and was no longer considered to be part of the PM2.5 emission control strategy. The chart of the percentage of predicted 24-hour PM2.5 NAAQS exceedances to which each facility significantly contributed is shown in Figure 2.

Cumulative Modeling: A three phased approach was used to develop the PM2.5 emission control strategy. For Phase I, the facilities determined to be part of the emission control strategy (GPC, MPW, and Union Tank Car) were required to submit a modeling scenario for their individual facility with predicted highest, first-high impacts below the 24-hour NAAQS of 35 $\mu g/m^3$using potential emission rates and excluding background concentrations. Since these facilities were determined to be a part of the emissions control strategy, the potential emission rates used in the cumulative modeling analysis for the SIP submittal will become the facility's permitted emission rates.

Figure 2. Revised Baseline Modeling Results



In Phase II, the DNR combined the data from the individual facilities into one cumulative modeling analysis. The submitted individual modeling scenarios for these three facilities were combined with emissions from the remaining five facilities that are part of the SIP. Since these five facilities are not considered to be part of the emissions reduction strategy, their modeled emission rates were based on the highest predicted PM2.5 emission rates when the source is operating at maximum capacity. These emission rates will not become their permitted emission rates, with the exception of Monsanto. The Monsanto facility requested that their modeled PM2.5 emission rates become enforceable. These PM2.5 emission rates were made enforceable through modified air construction permits issued October 24, 2012. This cumulative analysis evaluated the highest, eighth-high concentrations including background concentrations (see background discussion in the section below). The Phase II modeling analysis continued to result in numerous predicted exceedances of the NAAQS.

Phase III of the analysis evaluated facility-wide contributions to the predicted exceedances, including background concentrations, to develop the final emissions control strategy. Results from the Phase II modeling analysis were provided to GPC, MPW and Union Tank Car along with the specific receptor locations with predicted exceedance of the NAAQS where only their individual facility had a significant contribution. These facilities were then required to submit modeling analyses that either demonstrated that there were no longer any predicted exceedances of the NAAQS at these receptor locations, or that their facility no longer had a significant contribution to any of these NAAQS exceedances. The final cumulative analysis resulted in predicted exceedances of the 24-hour PM2.5 NAAQS, however the three

facilities determined to be part of the mitigation strategy do not cause any predicted exceedances and do not have a significant contribution to any predicted exceedance.

Background Value Selection: Background values are intended to account for emissions from natural sources, nearby minor sources not included in the analysis, unidentified sources, and in the case of PM2.5, secondary formation from other sources. Based on discussions with monitoring staff and EPA Region VII, the Iowa City monitoring site was initially determined to be representative of background concentrations for Muscatine. The Iowa City 24-hour 98th percentile monitored PM2.5 concentration for 2006-2008 was 29.0 $\mu g/m^3$.

Current EPA PM2.5 modeling guidance (March 2010 Stephen Page memorandum) indicates that combining the highest average of the maximum modeled 24-hour averages across five years of meteorological data with the monitored 24-hour design value may be overly conservative. This guidance also states that in some cases "…a Second Tier modeling analysis may be considered that would involve combining the monitored and modeled PM2.5 concentrations on a seasonal or quarterly basis, and re-sorting the total impacts across the year to determine the cumulative design value." At this time no additional guidance has been provided by EPA on the details of this approach or the circumstances where this approach may be appropriate.

On January 7, 2011, the National Association of Clean Air Agencies (NACAA) PM2.5 Modeling Implementation Workgroup provided EPA with recommendations regarding PM2.5 background concentrations for ambient air quality demonstrations required for New Source Review. In this document NACAA recommends that EPA include the option of a "Paired-Sums" approach where continuous data from a single monitor site could be combined with modeled concentrations prior to determining the design value.

Because a more refined approach was required for this situation, the DNR used a "Paired-Sums" approach for the cumulative modeling analyses. A data set of hourly background values was developed for the 2005 - 2009 period. The data was based on monitored concentrations from Iowa City with missing data filled (by order of preference) from Davenport, Des Moines, or the highest value observed at the Iowa City monitor (by month of year).

The AERMOD dispersion model version 11059 was enhanced in February 2011 to allow users to specify background concentrations to be added to the impacts from modeled emissions sources to determine cumulative impacts. Specifying background concentrations is discussed in section 2.5 of EPA's addendum to the AERMOD user's guide (version 12345). This section warns that since modeled concentrations are not calculated for hours with calm or missing meteorological data, background concentrations are also omitted for those hours, possibly resulting in lower than expected background concentration. A scaling factor was developed by the DNR to alleviate the potential of underestimating the background contribution due to any calm hours in the meteorological data.

Modeled Emission Rates and Stack Parameters

The 24-hour PM2.5 emission rates and source release parameters for the emission sources at GPC, MPW and Union Tank Car are summarized in the attached spreadsheets:

- PM25 SIP Modeling Parameters – GPC.xlsx
- PM25 SIP Modeling Parameters – MPW.xlsx
- PM25 SIP Modeling Parameters – UTC.xlsx

All point sources with a horizontal, downward or obstructed discharge were modeled with an exit velocity set equal to 0.001 m/s per the DNR modeling guidelines. This allows for buoyancy-induced plume rise while restricting momentum-induced plume rise that is prevented by a non-vertical stack.

Dispersion Modeling Results

The final cumulative Muscatine PM2.5 SIP modeling analysis resulted in predicted exceedances of the 24-hour PM2.5 NAAQS, however the three facilities determined to be part of the mitigation strategy, GPC, MPW and Union Tank Car do not cause any predicted exceedances and do not have a significant contribution to any predicted exceedance.

The model results of the highest, eighth-high modeled impacts (including the "paired-sums" background concentrations) indicate that predicted concentrations remain above the 24-hour PM2.5 NAAQS at fifteen receptor locations in the vicinity of the HJ Heinz and HNI HON Oak Steel facilities. The highest contribution to these exceedances by any facility in the mitigation strategy is 0.8 $\mu g/m^3$. Predicted exceedances in the vicinity of these two facilities will be resolved through DNR construction permit program and will not be addressed as part of the SIP evaluation.

At the remaining 3,986 receptors in the grid, the highest, eighth-high predicted impact (including the "paired-sums" background concentrations) was 35.30 $\mu g/m^3$. Per conversation with EPA Region VII, modeled concentrations below 35.49 $\mu g/m^3$ are sufficient for demonstrating compliance with the 24-hour PM2.5 NAAQS. This modeling analysis was conducted consistent with Appendix W to 40 CFR Part 51 and demonstrates what reductions will be needed to attain and maintain the PM2.5 NAAQS in Muscatine.

Table 3 summarizes the change in worse-case 24-hour PM2.5 concentrations between the most recent (revised) baseline modeling analysis and the post-control modeling analysis for the three sources included in the control strategy. The PM2.5 concentrations are the modeled maximums.

Table 3. Comparison of Predicted 24-hour Baseline and Post-Control PM2.5 Concentrations

Facility	Baseline 24-hour Concentration (ug/m3)	Post-Control 24-hour Concentration (ug/m3)
GPC	98.2	20.4
MPW	38.5	25.3
UTLX	113.6	9.3

Appendix A

Introduction

This is an analysis of the representativeness of the Cedar Rapids meteorological data for use in the ongoing PM2.5 modeling in the Muscatine area. During a conference call on July 13, 2010 EPA Region VII indicated that this analysis should address the differences in surface characteristics between the Cedar Rapids measurement site and the application site in Muscatine. EPA and DNR agreed that the analysis should focus on the area near the Grain Processors Corp (GPC) facility, and that the analysis would be applicable for the entire modeling domain. Due to the expansive nature of the GPC facility, the DNR proposed to center the analysis on the GEP stack (EP001). EPA approved this approach, and EPA and DNR also agreed that the analysis should consider the variation of surface characteristics from different wind direction sectors due to the proximity of the Mississippi River immediately to the East of the facility.

The comments provided by EPA on the proposed modeling protocol indicated that this analysis should follow the requirements of 40 CFR, Part 51, Appendix W, Section 8.3 **[1]**. This section states that the representativeness of meteorological data is dependent on four factors:

- Instrument Exposure – The exposure of the meteorological monitoring site.
- Temporal Proximity – The period of time during which data are collected.
- Spatial Proximity – The proximity of the meteorological monitoring site to the area under consideration.
- Geographic Features and Land Cover – The complexity of the terrain.

Each of these criteria is covered in detail in the Department's "Meteorological Data Representivity Analysis" document **[2]**. The information in that document that directly applies to this analysis, as well as the requested comparison of surface characteristics at the measurement and application sites is presented herein.

Instrument Exposure

Instrument exposure refers to the ability of the instruments to measure meteorological conditions without the influence of manmade or natural obstructions. If obstructions are present, they can influence the measurements of the meteorological monitoring site. For example, a tree located near an instrument tower could alter the speed and direction of the wind at the instrument. These effects, or any others like them, are not desirable, and any instrument affected by such local-scale influences should not be used to develop meteorological data for use in a dispersion model.

The Cedar Rapids meteorological site is an Automated Surface Observing Station (ASOS), and is located at the Cedar Rapids airport. Airport-based ASOS stations are purposely sited with good exposure so that they may provide accurate weather information for the aviation community. It is stated that "the NWS will follow the guidelines documented in the Federal Standard for Siting Meteorological Sensors at Airports" when siting ASOS stations **[3]**. These standards include siting and exposure requirements that limit the effects of any obstructions within 1000 feet of the anemometer **[4]**. Because of this it was determined that instrument exposure would not affect the representativeness of the Cedar Rapids data.

Temporal Proximity

"Consecutive years from the most recent, readily available 5-year period are preferred" for use with regulatory air dispersion modeling analyses **[1]**. At the time this analysis began, 2008 was the most recent year available. Therefore the years 2004 – 2008 were used in the processing of the AERMOD meteorological data set.

Spatial Proximity

The nearest existing meteorological site is at the Muscatine airport. This site is only 5 miles to the West, and within the river valley in which the entire modeling domain is located. However, the Muscatine data contains over 20% calms. Model concentrations tend to increase during periods of low wind speeds. Unfortunately, calms are generally reported during these same periods. Since AERMOD interprets calms as missing data, excessive amounts of calms during low wind speed periods would result in an overall reduction in predictions during the period with the highest likely concentration. This sort of under-prediction bias is not desirable, and thus the Muscatine data was eliminated as a possibility for this analysis.

The three nearest meteorological stations for which the Department has processed data for use in AERMOD are Moline, IL (29 miles); Burlington, IA (43 miles); and Cedar Rapids, IA (48 miles). For reasons described in the following section, Cedar Rapids was chosen as the most representative of these nearby stations.

Geographic Features and Land Cover

Geographic features can affect meteorological patterns in an area due to uneven heating and cooling of land and water, and physical redirection of atmospheric flow. It is difficult to quantify these effects analytically, but they can be observed to some extent by reviewing historical measurements. As described in the Department's "Meteorological Data Representivity Analysis" document, wind roses can be used to view the wind patterns caused by terrain influences. It can be assumed that two locations with similar wind roses either have similar terrain effects, or that the terrain does not significantly alter the mesoscale atmospheric flow.

As stated in the previous section, the Muscatine airport is located within the river valley included in the modeling domain, but is unusable for the modeling analysis because of the large number of missing data. Even so, because of the proximity of the Muscatine airport to the modeling domain, the data that is available can be used as a comparison to other sites with more complete records. The wind rose for the Muscatine airport and the three next nearest sites for which the Department has AERMOD-ready meteorological data are shown in Figures A1 – A4 **[2]**.

The nearest site, Moline, is the least similar to the wind rose observed at Muscatine. That location was eliminated as a possibility, leaving two sites. Both Burlington and Cedar Rapids have wind roses that are very similar to the wind rose from Muscatine. However, the dominant wind directions appear rotated approximately 40 degrees clockwise at Burlington, as does the direction of the most common lower wind speed (which is an important consideration for design concentrations). On the other hand the dominant wind directions at Cedar Rapids match those observed at the Muscatine airport very well.

In EPA's comments to the original modeling protocol for this analysis, concern was expressed that using wind roses alone as a surrogate for terrain and land cover influences may not be sufficient in this application. Specific concern was expressed regarding the ability of the Cedar Rapids data to accurately represent the planetary boundary layer in the modeling domain due to differences in surface roughness between airports and industrial sites.

Based on the AERMOD Implementation Guide, a comparison of the surface characteristics between the National Weather Service (NWS) measurements site and the facility location, coupled with a determination of the importance of those differences relative to predicted concentrations, is appropriate in this case **[5]**.

An AERSURFACE analysis was conducted for both the Cedar Rapids meteorological site and the area around the GPC facility. The analysis at GPC was centered on the GEP stack at the facility as agreed upon by EPA Region VII. Of main concern with regard to the representivity of the surface characteristics is the notable contrast between the low roughness of the Mississippi River to the East of the modeling domain and the high roughness of the industrial area to the West (where surface roughness varies from near zero over the river to nearly one meter over the land). Whereas the surface roughness around the meteorological measurement site is much more homogenous, with nearly the entire area being either cropland or grassland with only a scattering of other land use types. The most notable variation in surface roughness around the meteorological measurement site is the change from croplands in the south to grassy areas around the runways to the north (where surface roughness varies from around 0.1 meters over the grassy areas to 0.2 meters over the cropland in the summer and early fall, and is nearly identical during the remainder of the year). For this reason, it was decided to focus on the application site when selecting the sectors to be analyzed. Therefore, results were calculated for two separate sectors. Sector 1 covers wind directions from 0 to 140 degrees and encompasses wind directions that cross the river at the application site. Sector 2 covers the remainder of the compass directions (140 – 360 degrees) and represents wind directions that cross the land at the application site. See Figure A5 for a depiction of the National Land Cover Data (NLCD) and the two sectors used in the analysis.

Figure A1. Muscatine Wind Rose

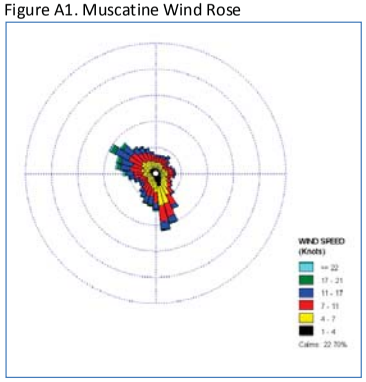


Figure A2. Burlington Wind Rose

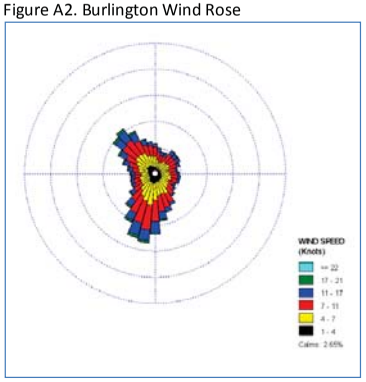


Figure A3. Cedar Rapids Wind Rose

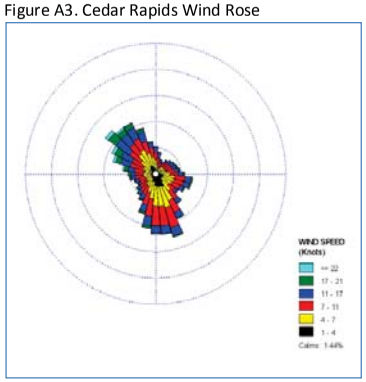
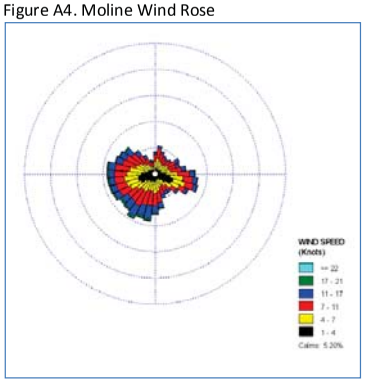


Figure A4. Moline Wind Rose



The net differences between the measurement and application sites are presented in Table A1. Positive numbers indicate a higher value at the measurement site, while negative numbers indicate a lower value.

Table A1. Surface Characteristic Differences Calculated by AERSURFACE

Sector	Albedo	Bowen Ratio	Surface Roughness (m)
1 – Over River (0° – 120°)	+ 0.03	+ 0.06	+ 0.05
2 – Over Land (120° – 360°)	+ 0.03	+ 0.06	– 0.41
Average	+ 0.03	+ 0.06	– 0.18
Possible Range	0.1 – 0.6	0.1 – 6.0	0.0001 – 1.3

The albedo at both sites is very comparable. The albedo at the measurement site is slightly higher than at the application site. The net difference (+ 0.03) is equivalent to only 6% of the possible range of albedo values in AERSURFACE (0.1 – 0.6). This very small difference is not expected to have any significant effect on predicted concentrations.

The Bowen Ratio at both sites is also very comparable. The Bowen Ratio at the measurement site is slightly higher than at the application site. The net difference (+ 0.06) is equivalent to only 1% of the possible range of Bowen Ratio values in AERSURFACE (0.1 – 6.0). This very small difference is not expected to have any significant effect on predicted concentrations.

As expected, the difference in surface roughness between the two sites is more significant than the other two surface characteristics. For the over-river sector, the surface roughness is only slightly higher at the measurement site than at the application site. However, for the over-land sector, the surface roughness is much lower at the measurement site than at the application site. The net differences for sectors 1 and 2 (+ 0.05 and – 0.41) are equivalent to 4% and 32% of the possible range of surface roughness values in AERSURFACE (0.0001 – 1.3).

A known issue with the use of the 1992 NLCD in AERSURFACE is the fact that transportation areas (low roughness) are included in the same category as residential and industrial areas (high roughness). The AERSURFACE user guide estimates that roads and runways would have a roughness value of 0.05 meters (based on the bare rock/sand/clay category), and residential and industrial areas have a roughness value of between 0.54 meters and 1.0 meter. AERSURFACE also assumes that the roughness value for industrial areas not at an airport already contain 20% transportation (estimated using the bare rock/sand/clay category). Low intensity residential assumes no transportation, but does include 10% grassy areas (also a lower roughness value). High intensity residential includes neither transportation nor grassy areas **[6]**.

Further investigation of the application site indicates that the amount of Industrial and Residential land use in the area is greatly over-estimated in the 1992 NLCD. For this reason a separate analysis was performed outside of AERSURFACE to determine the extent of the over-estimation.

An aerial photograph from 2009 (Figure A6) was examined and several types of general land use were manually applied based on the image (Figure A7). As can be seen when comparing Figures A5 and A7, there is a large portion indicated as Industrial or Residential (shades of red and pink in Figure A5) in the 1992 NLCD where the true land cover is either roadways, parking lots or barren ground (yellow in Figure A7), or grassy areas (light green in Figure A7). The result is an overestimation of the surface roughness values when using AERSURFACE.

To determine the effect that this discrepancy has on the roughness values the percentage of mislabeled Residential and Industrial land cover in sector 2 was determined. This was accomplished by overlaying that portion of the manual land use analysis indicated as roadway, barren or grassland on areas in the 1992 land use image that were indicated as being either Industrial or Residential (see Figure A8). Only areas that were originally labeled as either Industrial or Residential in the 1992 NLCD are shown. Areas that were neither Residential nor Industrial, or that were not in Sector 2, are shown in white. The areas that are still depicted in shades of red and pink were correctly labeled as Residential or Industrial. The areas depicted in yellow are areas that should have been labeled as roadways or as barren land. The areas depicted in light green are areas that should have been labeled as grassland.

Figure A5. 1992 National Land Cover Data with Analysis Sectors.

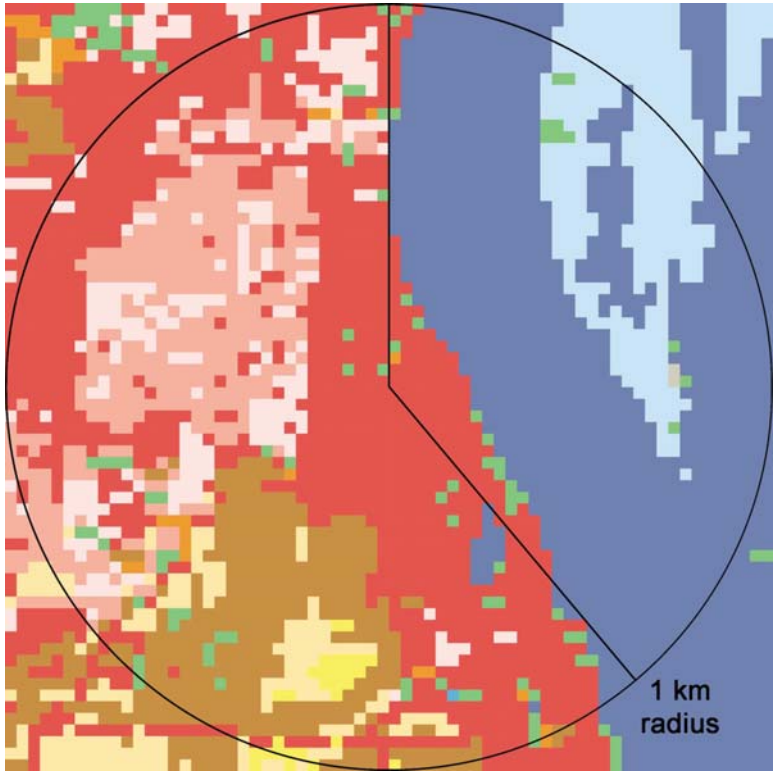


Figure A6. 2009 Aerial Photograph with Analysis Sectors

Figure A7. Manual Land Use Analysis Using 2009 Aerial Photograph

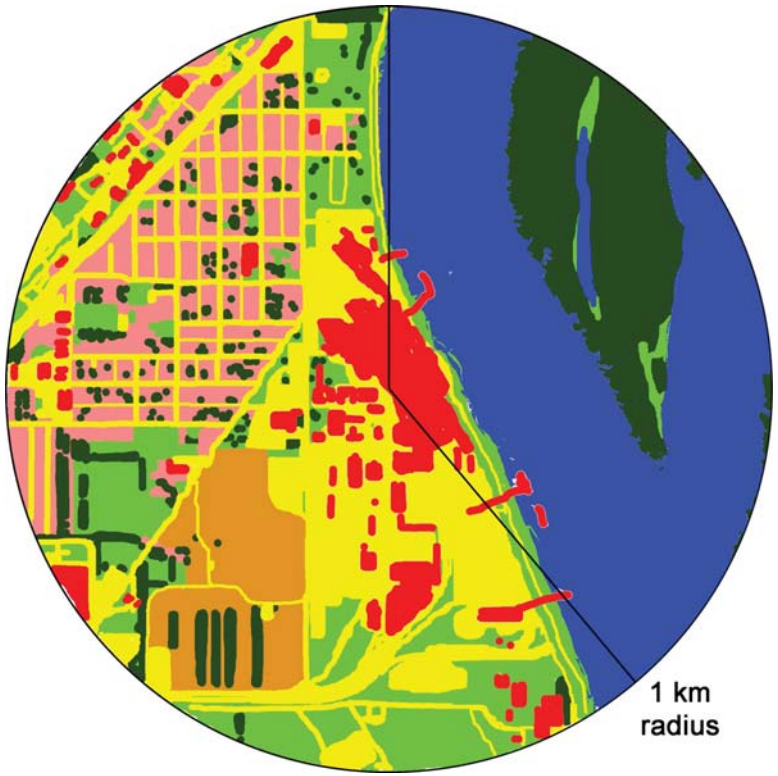
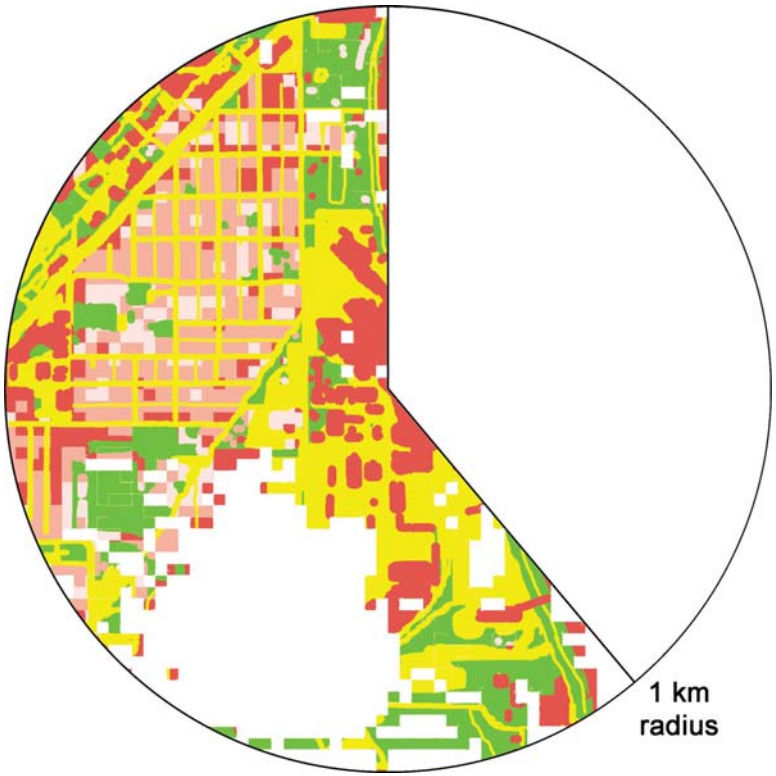


Figure A8. Evaluation of Mislabeled Residential and Industrial Areas in 1992 NLCD

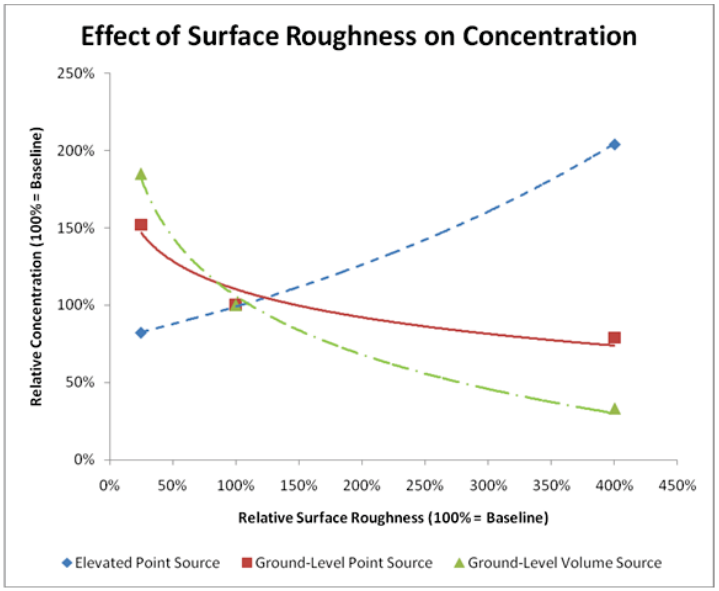


This analysis indicates that approximately 58% of the flat open areas (roads, barren or grassland) in sector 2 were mislabeled as Industrial or Residential in the 1992 NLCD, greatly increasing the surface roughness calculated by AERSURFACE. A direct adjustment to the surface roughness calculated by AERSURFACE is not possible because it is based on a distance-weighted average. However, it is certain that the true roughness in this area is much lower than that calculated by AERSURFACE. In addition, this analysis was centered on the most concentrated area of Industry in the modeling domain. The surface roughness determined at this location is likely to be higher than at any other location in the modeling domain. Per the CFR, the surface characteristics at the measurement site should be compared to those that "generally describe the analysis domain" **[1]**. These things considered, the surface roughness in the

over land sector is likely to be slightly higher, but generally similar to the general surface roughness of the measurement site.

As depicted in Figure A9, model concentrations tend to increase as surface roughness increases for elevated sources (due to an increased rate of mixing of emissions down to the surface), and to decrease as surface roughness increases for ground-based sources (due to increased dispersion in the lower portion of the boundary layer) **[7]**. Based on this, and the generally higher surface roughness seen in the over land sector, the application of Cedar Rapids meteorological data in the Muscatine modeling domain is expected to cause increased concentrations from elevated sources and decreased concentrations from ground-based sources in the Eastern portion of the modeling domain. The magnitude of these effects cannot be known, but it appears that the discrepancies between surface roughness at the measurement and application sites will be relatively small. As such, the effects on predicted concentrations are also expected to be relatively small.

Figure A9. Depiction of Model Sensitivity to Surface Roughness



Conclusion

The Cedar Rapids meteorological station easily meets the exposure, temporal proximity and spatial proximity criteria outlined in the CFR when applied in the Muscatine modeling domain. There is also good agreement between the sites for terrain influences, and the albedo and Bowen Ratio surface characteristics. The main concern between these sites is the surface roughness. As described herein, the differences in surface roughness between the two sites are relatively minor once the discrepancies in land cover data are considered. These minor differences are expected to increase predicted concentrations caused by some sources and decrease the concentrations caused by others. Given the good agreement of the majority of representivity criteria, and the counter-balancing effects of the minor surface roughness discrepancies, the Cedar Rapids meteorological data is considered representative of the Muscatine modeling domain.

References

1. Code of Federal Regulations, Title 40 (Protection of the Environment) Appendix W to Part 51 – Guideline on Air Quality Models, Section 8.3.

2. Iowa DNR – Air Quality Bureau, 2006. Meteorological Data Representivity Analysis, http://www.iowadnr.gov/air/prof/tech/files/representivity_analysis.pdf.

3. McCarthy, D. H. et al, 2005. Instrument Requirements and Standards for the NWS Surface Observing Programs (Land), p. 4. http://www.nws.noaa.gov/directives/sym/pd01013002curr.pdf.

4. Wright, J. M., 1994. Federal Coordinator for Meteorological Services and Supporting Research, Federal Standard for Siting Meteorological Sensors at Airports, Section 2.5. FCM-S4-1994 Washington D.C. http://www.ofcm.gov/siting/text/a-cover.htm.

5. U.S. EPA, 2009. AERMOD Implementation Guide. http://www.epa.gov/ttn/scram/7thconf/aermod/aermod_implmtn_guide_19March2009.pdf.

6. U.S. EPA, 2008. AERSURFACE User's Guide.

7. Long, G. E., Cordova, J. F. and Tanrikulu, S., 2004. An Analysis of AERMOD Sensitivity to Input Parameters in the San Fransisco Bay Area. 13th Conference on the Applications of Air Pollution Meteorology with the Air & Waste Management Association. p. 4.

Addendum to Appendix A of the Modeling Protocol for the Muscatine PM2.5 SIP Revision

The Department completed processing of a new meteorological data set for the period 2005 – 2009 for use in dispersion modeling analyses performed as part of the pre-construction permit application review process in February of 2013. Several additional sites were discovered that met the 90% data completeness requirement described in Appendix W, as well as having 1-minute data available to be used in the newest version of the AERMET meteorological data preprocessor. One of these additional sites is the Davenport airport (KDVN).

The Department has determined that the Davenport data is representative of the area being analyzed in the Muscatine PM2.5 SIP modeling, and will utilize 2005 – 2009 Davenport data for the remaining portions of the Muscatine PM2.5 SIP analysis instead of the 2004 – 2008 data from Cedar Rapids.

Analysis of Wind Roses

Shown below are the 2005 – 2009 wind roses for the meteorological sites in question (Figures 1 – 3). All three wind roses indicate similar predominant wind directions (NW and S). Both Cedar Rapids and Davenport include a similar amount of calm winds, while the Muscatine data includes a much larger percentage of calms. This higher percentage of calms is likely caused by the lower quality instrumentation at the Muscatine airport, and is one reason why the Muscatine data is inappropriate for use in the dispersion model.

To determine representivity the Department calculated the correlation coefficient between the wind roses at the various meteorological sites in and around Iowa. Figure 4 depicts different levels of correlation between the wind field at the Muscatine airport and the wind fields in other areas of the state. The blue-shaded area indicates a distance-weighted correlation coefficient of 0.9 or higher and the green-shaded area indicates a distance-weighted correlation coefficient of 0.8 or higher. All other areas have a correlation coefficient lower than 0.8. Based on this analysis, the data from Davenport were determined to be slightly more correlated to the data from Muscatine than are the data from Cedar Rapids.

Analysis of Surface Characteristics

Another concern expressed by EPA during the review process for the Muscatine PM2.5 SIP modeling protocol was the difference in surface characteristics around the meteorological data measurement site and the application site. A thorough analysis of the differences in surface characteristics between Cedar Rapids and the modeling domain in Muscatine was provided in the previously approved modeling protocol. The land use characteristics around the Davenport airport are very similar to those around the Cedar Rapids airport, resulting in very similar exposures for the meteorological instruments located at both locations. Aside from the airport runways and terminals, the areas surrounding both sites are comprised almost entirely of cropland. Therefore, switching from Cedar Rapids to Davenport data should have only a minimal effect on the surface characteristics analysis, and the assertions made in the analysis in the previously approved modeling protocol should remain valid.

Upper Air Data

Consecutive years of upper air data from Davenport were previously used with the Cedar Rapids surface data. Consecutive years of upper air data from Davenport will also be used with the Davenport surface data.

Figure 1. Muscatine

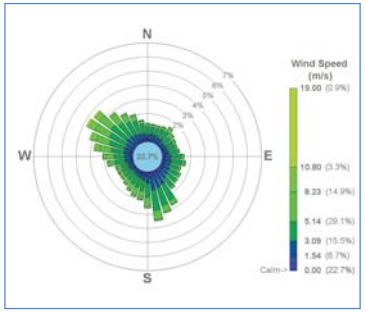


Figure 2. Davenport

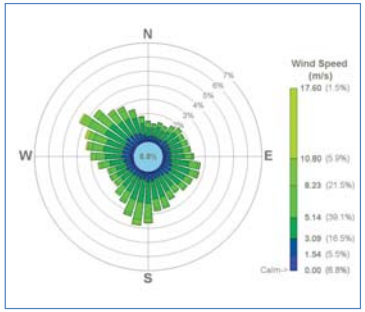


Figure 3. Cedar Rapids

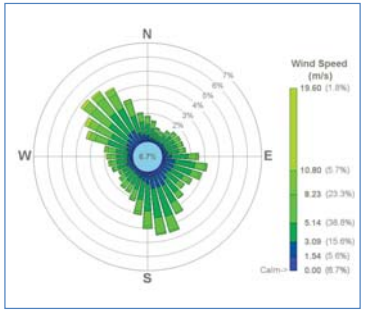
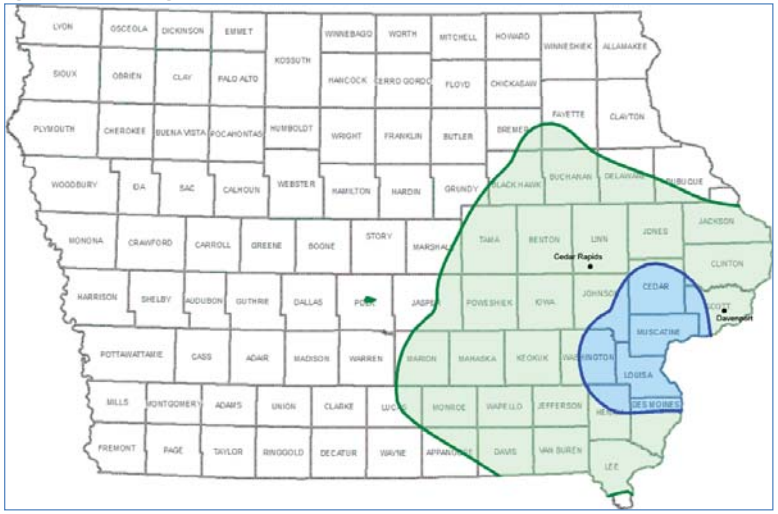


Figure 4. Distance-weighted Correlation to Muscatine Wind Field



Attachment B. GPC Administrative Consent Order

IOWA DEPARTMENT OF NATURAL RESOURCES
ADMINISTRATIVE CONSENT ORDER

IN THE MATTER OF: **GRAIN PROCESSING CORPORATION** **Muscatine County, Iowa**	ADMINISTRATIVE CONSENT ORDER NO. 2014-AQ-

TO: Grain Processing Corporation
1600 Oregon Street
Muscatine, Iowa 52761

Chuck Becker
Belin McCormick
666 Walnut Street, Suite 2000
Des Moines, Iowa 50309

I. SUMMARY

This administrative consent order is entered into between Grain Processing Corporation (GPC) and the Iowa Department of Natural Resources (DNR) for the purpose of addressing monitored exceedences of the 2006 24-hour National Ambient Air Quality Standards (NAAQS) for fine particulate matter with a diameter of 2.5 microns or smaller (PM 2.5) in Muscatine, Iowa. This administrative consent order shall create an enforceable control strategy for GPC to meet its portion of the requirements of the United States Environmental Protection Agency's (EPA) State Implementation Plan (SIP) call for Muscatine County, Iowa and establishes time schedules for completion of such control strategy as being as expeditious as practicable. The parties have agreed to the provisions below.

Questions regarding this administrative consent order should be directed to:

Kelli Book, Attorney
DNR – Legal Services
7900 Hickman Road, Suite 1
Windsor Heights, Iowa 50324
(515) 725-9572

II. JURISDICTION

The administrative consent order is issued pursuant to the provisions of Iowa Code sections 455B.134 (9) and 455B.138 (1) which authorize the director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II, and the rules promulgated or permits pursuant thereto, and to prevent, abate, and control air pollution.

III. STATEMENT OF FACTS

1. 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.

2. On September 21, 2006, EPA lowered the 2006 24-hour NAAQS for PM 2.5 from 65 to 35 micrograms per cubic meter ($\mu g/m^3$) of air. DNR adopted the 2006 24-hour PM 2.5 NAAQS in 2007 and the adoption became effective on September 26, 2007. DNR's monitoring data at the Garfield Elementary School in Muscatine for the 2007-2009 and 2008-2010 periods resulted in 2006 24-hour PM 2.5 design values of 38 and 37 $\mu g/m^3$, respectively. These values exceeded the 24-hour health standard.

3. On June 28, 2011, EPA signed a finding that Iowa's SIP was not adequate to maintain the 2006 24-hour PM 2.5 NAAQS in Muscatine. On July 14, 2011 the findings were published in the Federal Register and became effective on August 15, 2011. EPA required the State of Iowa to revise its SIP to correct the deficiency. The SIP revision must include the following: an emissions inventory for all sources that could be contributing to the monitored exceedences, a modeling demonstration that shows what reductions will be necessary to attain and maintain the standards in the area, adoption of federally enforceable measures to achieve the reductions determined to be necessary to maintain the standards in the area, and an enforceable commitment to implement contingency plans to further reduce emissions if the health standards are not met as planned.

4. Air dispersion modeling of GPC was conducted and the modeling predicted that GPC was a contributor to the monitored 2006 24-hour PM 2.5 levels exceedences. GPC is not the sole contributor of PM 2.5 emissions in Muscatine and other contributors are also being asked to address their PM 2.5 emissions.

5. DNR, GPC and the other contributors have been working together to quantify PM 2.5 emissions, identify sources that may need controls upgraded or added, and develop a timeline for implementing the necessary changes. GPC has submitted a

control strategy that requires a large number of new permits, permit modifications and variances. GPC has submitted some, but not all, construction

permit applications to the DNR for evaluation. The DNR and GPC are entering into this administrative consent order to create an enforceable control strategy and timeline for implementation of the $PM_{2.5}$ SIP call pursuant to the understanding that EPA will and does approve Iowa's $PM_{2.5}$ SIP response and as amended at the request of GPC and approved by DNR ($PM_{2.5}$ SIP). However it does not allow GPC to begin construction without the proper air quality construction permits or variances. GPC is required to obtain all necessary air quality construction permits or variances and to operate the equipment in accordance with the construction permits or variances, Attachment A, and Attachment B even if it requires GPC to alter construction or operation of the equipment, with the understanding that DNR will not unreasonably withhold or delay issuance of the necessary permits, provided that all requested permit application information is submitted and deemed complete.

6. GPC is currently engaged in a significant number of changes and modifications of the facility that will favorably affect the air emissions from the facility. Additionally, the provisions of this administrative consent order may be impacted in the event the pending judicial action by the Attorney General is resolved by agreement or judge, or by the 1 hour sulfur dioxide nonattainment designation in Muscatine County. The parties recognize that these events may result in a need to amend the existing terms of this administrative consent order. Amendments to this administrative consent order and the attachments constitute a revision to the SIP and must be submitted to the EPA for approval.

7. The control strategy currently being implemented by GPC at the facility, in cooperation with DNR, is anticipated to have substantial beneficial effects related to particulate matter emissions, as well as other air emissions.

IV. CONCLUSIONS OF LAW

1. Section 110(k)(5) of the Clean Air Act provides that "[w]henever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standard…the Administrator shall require the State to revise the plan as necessary to correct such inadequacies." On June 28, 2011, EPA signed a finding that Iowa's SIP was not adequate to maintain the 2006 24-hour PM 2.5 NAAQS in Muscatine and required the state to submit a plan to correct the SIP.

2. 567 Iowa Administrative Code (IAC) 28.1 states that the ambient air quality standards for the State of Iowa shall be the NAAQS located at 40 Code of Federal Regulations (CFR) Part 50, as amended through February 9, 2010. 40 CFR 50 states that the 24-hour PM 2.5 NAAQS is 35 $\mu g/m^3$ of air. The monitoring data at the Garfield Elementary School in Muscatine for the 2007-2009 and 2008-2010 periods indicated that the 24-hour PM 2.5 design values were at 38 and 37 $\mu g/m^3$,

respectively. Air dispersion modeling of GPC was conducted and the modeling predicted that GPC was a contributor to the PM 2.5 levels measured.

3. Iowa Code sections 455B.134 (9) and 455B.138 (1) authorize the director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division II, and the rules promulgated or permits pursuant thereto, and to prevent, abate, and control air pollution. This administrative consent order will create an enforceable control strategy to address the PM 2.5 concentrations in Muscatine.

4. 567 IAC 22.1(1) and 567 IAC 22.1(3) require the owner or operator of a stationary source to obtain a permit to install or alter equipment or control equipment unless otherwise exempt. Any modifications occurring as a result of this administrative consent order and subject to the provisions of 567 IAC chapter 22 shall require a construction permit or variance.

V. ORDER

THEREFORE, the DNR and GPC agree to the following:

1. GPC shall implement the control strategy contained in Attachment A and Attachment B to this administrative consent order. Attachment A and Attachment B detail actions that GPC must take with each source included in the control strategy; the emission limits for each source; point source characteristics; and the deadlines for completing each source modification and achieving the specified source emission limit. GPC may install and operate additional emission control projects and may improve the emission controls listed in the attachments as is necessary to further reduce ambient PM 2.5 concentrations in Muscatine, Iowa with prior approval of the DNR;

2. GPC shall meet the emission limits and construction modification dates specified by the deadlines stated in Attachment A. GPC cannot begin construction without the issuance of air quality construction permits or variances. GPC is required to obtain all necessary air quality construction permits or variances and to operate the equipment in accordance with the construction permits or variances. DNR will not unreasonably withhold or delay the issuance of the necessary permits, provided that all requested permit application information is submitted and deemed complete;

3. GPC shall comply with the point source characteristics contained in Attachment B to this administrative consent order unless otherwise specified in Attachment A;

4. Construction permits or variances required by the administrative consent order and the attachments to the administrative consent order may be modified with the written approval of DNR and GPC. The administrative consent

order shall be updated at least annually to incorporate any changes agreed upon by the parties. Any request for modifications to the construction permits, variances, or attachments must be submitted prior to the deadline of the required action. Any modifications to the construction permits, variances, or attachments may result in the requirement to complete a modeled attainment demonstration using approved dispersion modeling techniques, if requested by the DNR;

5. GPC shall submit complete air quality construction permit application requests for construction permit modifications for existing construction permits, and variance requests to DNR within 90 days from the date the Director signs this administrative consent order, with the exception of the construction permit applications for EP1, EP143, EP158, and EP199. The complete air quality construction permits for the four emission points must be submitted within 90 days from the date a final resolution of *State of Iowa v. Grain Processing Corporation*, Law No. CVCV 02020979 pending in the Iowa District Court for Muscatine County. Until the air quality construction permits for EP1, EP143, EP158 and EP199 have been incorporated into the SIP and federally approved, GPC shall comply with the terms of this administrative consent order and all attachments, unless otherwise voided by the terms of this administrative consent order. If a determination is made that PSD has been triggered, complete PSD application(s) shall be submitted in a timely manner agreed upon by DNR and GPC. Construction permits issued under this administrative consent order shall incorporate the control strategy provided in Attachment A and Attachment B. GPC cannot begin construction until the appropriate permits have been issued;

6. In addition to all applicable requirements, GPC shall comply with following requirements:

> Performance Testing: Beginning on or before May 31, 2017 (180 days after completion of the control strategy) GPC shall complete a minimum of one performance test to demonstrate compliance with the PM2.5 emission limits contained in Attachment A, or as modified and included in the construction permits, for the emission points listed in Attachment C to this administrative consent order. The need to conduct the actual testing and the methodology used to demonstrate compliance shall be consistent with the requirements in 567 IAC 25.1(9) and the notification and reporting requirements in 567 IAC 25.1(7) and shall be exercised in the same manner as applied to other industrial sites in Iowa. If allowed by EPA, DNR may use alternative testing protocol as appropriate. During performance testing, all units shall be operated at maximum rated capacity, unless otherwise restricted in a permit.
>
> In the event any performance testing conducted by GPC shows an exceedence, GPC shall take prompt and reasonable action to address the exceedence and

communicate to the DNR how the exceedences will be corrected and when additional testing shall take place.

Work Practices: GPC shall follow the monitoring, recordkeeping and reporting requirements contained in Attachment D to this administrative consent order beginning on the date this administrative consent order is signed unless otherwise specified in Attachment D. These requirements are in place to ensure continuous compliance of the equipment with the emission limits contained in Attachment A to this administrative consent order. It is understood that the terms of Attachment D relating to "Operation Requirement" reflects the results of initial performance testing and that this requirement many be modified after the initial test. These requirements may be adjusted after performance testing is completed to more accurately represent the observed operating ranges of the equipment during the successful demonstration of compliance. GPC shall maintain on-site written records demonstrating compliance with the operation and maintenance requirements specified in Attachment D. If a requirement(s) specified in Attachment D cannot be completed due to unforeseen circumstances, then the conditions which prevented the completion of the requirement(s) shall be documented, including the time period during which the conditions preventing completion of the requirements existed and the actions taken to remedy the situation. The written records shall be maintained on-site for at least two years and shall be made available to representatives of the DNR and EPA upon request;

7. GPC shall submit to the DNR Air Quality Bureau written semi-annual reports detailing progress toward the completion of the requirements of this administrative consent order. The semi-annual reports shall be due no later than 30 days following the end of each semi-annual period (the semi-annual periods are defined as January 1 – June 30 and July 1 – December 31). The first report shall be due 30 days from the date the Director signs this administrative consent order. The semi-annual reporting may be terminated following submittal of a final report and written request to the DNR, and a written response from the DNR stating that all such described requirements of this administrative consent order have been satisfactorily completed; and

8. GPC shall certify compliance with the provisions of this administrative consent order as part of GPC's compliance certification obligations pursuant to its Title V Operating permit for this facility.

VI. FAILURE TO ACCEPT PROPOSED $PM_{2.5}$ SIP

Due to the fact that the purpose of this administrative consent order is to provide for federal enforceability of the control strategy imposed on GPC, thereby allowing approval of the $PM_{2.5}$ SIP call by EPA, the purpose of this administrative consent order is not satisfied if DNR does not propose and EPA does not approve the terms of the $PM_{2.5}$ SIP call. Therefore, if, for any reason DNR does not approve and

submit to EPA the terms of the $PM_{2.5}$ SIP call within 60 days of the execution of this administrative consent order, either GPC or DNR may withdraw from the terms and

conditions of this administrative consent order and, upon such written withdrawal the terms and conditions of this administrative consent order shall be null and void in their entirety and for all purposes.

In addition, if, for any reason, EPA does not accept and approve all terms and provisions of the $PM_{2.5}$ SIP call within 22 months of the execution of this administrative consent order, either GPC or DNR may withdraw from the terms and conditions of this administrative consent order and, upon such written withdrawal, the terms and conditions of this administrative consent order shall be null and void in their entirety and for all purposes.

VII. RESERVATION OF RIGHTS

This administrative consent order is entered into for the purposes of addressing monitored exceedences of the 2006 24-hour PM 2.5 NAAQS in Muscatine, Iowa and for creating an enforceable control strategy for GPC to address its PM 2.5 emissions. DNR reserves the right to bring an enforcement action to assess monetary penalties for any potential violations that may arise from the facts stated in this administrative consent order or to pursue referral to the Attorney General, to obtain injunctive relief and penalties or fines, pursuant to Iowa Code section 455B.146 or 455B.146A. Additionally, DNR reserves the right to bring an enforcement action or to pursue referral to the Attorney General, to obtain injunctive relief and penalties or fines, pursuant to Iowa Code section 455B.146 or 455B.146A, for alleged violations not addressed in this administrative consent order which may have occurred at or in relation to the GPC facility in Muscatine, Iowa to the extent but only to the extent, such claims are not inconsistent with or barred by any other court rulings, consent decrees, or settlement agreements. Nothing in this administrative consent order restricts or limits the administrative or judicial enforcement remedies available to the DNR or the State of Iowa for potential violations that may arise from the facts stated in this administrative consent order or any other violations which may have occurred at the GPC facility in Muscatine, Iowa. Nothing in this administrative consent order restricts or limits GPC's right to submit materials for consideration by the DNR, to contend that requirements are not applicable, to present discussion or arguments that the permit requirements are not applicable, to present discussions or arguments as part of the permit or deliberative process or requirements, or to appeal, in accordance with Iowa law, permit provisions.

VII. WAIVER OF APPEAL RIGHTS

This administrative consent order is entered into knowingly by and with the consent of GPC. For that reason, GPC waives the right to appeal this administrative consent order pursuant to the provisions of Iowa Code section 455B.138.

VIII. NONCOMPLIANCE

Failure to comply with this administrative consent order may result in the imposition of further administrative penalties or referral to the Attorney General to obtain injunctive relief and civil penalties pursuant to Iowa Code section 455B.146.

IX. TERMINATION OF THIS ADMINISTRATIVE CONSENT ORDER

This administrative consent order shall terminate upon a showing by GPC, acceptable to DNR and responded to in writing by the DNR, that it has complied with the obligations contained herein or as may otherwise be agreed upon by the parties. A termination of this administrative consent order will only be considered after all construction permits, with equivalent or more stringent requirements than those listed in the Attachments to this administrative consent order, have been issued, construction is completed, and all construction permits have been incorporated into the Iowa SIP and federally approved.

_____
Chuck Gipp, Director
Iowa Department of Natural Resources

Dated this _____ day of _____, 2014.

_____
GRAIN PROCESSING CORPORATION

Dated this_____day of _____, 2014.

#70-01-004; Sarah Piziali, DNR Air Quality; Jim McGraw, DNR Air Quality; Kelli Book; EPA

GPC Consent Order Attachments A, B, C, and D

ATTACHMENT A - GPC Control Strategy and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID	ADD CONTROL	MODIFY SOURCE CHARACTERISTICS	ESTABLISH OPERATIONAL RESTRICTION	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	EMISSION LIMIT EFFECTIVE DATE (beginning on or before date listed below*)
1	BIP Stack (EMs 1-4 and 6-9)	NONE	MULTICLONES (TEP ON 6&8, EB-1 ONLY)	EP10	add dry FGD, baghouse and carbon injection (DIR		limit boilers to gaseous fuels only	January 31, 2016	36.400	January 31, 2016
2	PEL Add-Ons	77-A-317-S1	BAGHOUSE	EP10				NA	0.037	July 14, 2013
3	MAP, ATM Unit Grain Cooler	NONE	CYCLONE	EP14.0				NA	0.028	July 14, 2013
4	MAP, ATM Mill Grain Dryer	79-A-354-S1	CYCLONE	EP15.0				NA	0.230	July 14, 2013
5	Starch, #1 Flash Dryer	NONE	NONE	EP8.1			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
6	Starch, #2 Flash Dryer	NONE	NONE	EP8.2			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
7	Starch, #3 Flash Dryer	NONE	NONE	EP8.3			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
8	Starch, #4 Flash Dryer	NONE	NONE	EP8.4			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
9	Starch, #1 Flash Dryer	NONE	NONE	EP15.1			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
10	Starch, #2 Flash Dryer	NONE	NONE	EP15.2			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
11	Starch, #3 Flash Dryer	NONE	NONE	EP15.3			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
12	Starch, #4 Flash Dryer	NONE	NONE	EP15.4			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
13	Starch, #1 Flash Dryer	NONE	AERODYNE	EP16.1			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
14	Starch, #2 Flash Dryer	NONE	AERODYNE	EP16.2			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
15	Starch, #3 Flash Dryer	NONE	AERODYNE	EP16.3			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
16	Starch, #4 Flash Dryer	NONE	AERODYNE	EP16.4			permanently cease operation of emission unit(s) or emission point	December 31, 2016	0.000	December 31, 2016
17	DHI, #1 Product Aerodyne	71-A-(D)1	AERODYNE	EP18.1			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
18	DHI, #2 Product Aerodyne	71-A-(D)1	AERODYNE	EP18.2			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
19	DHI, #3 Product Aerodyne	71-A-(D)1	AERODYNE	EP18.3			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
20	DHI, #1 Rotary Dryer	NONE	EXP CHAMBER	EP12.1			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
21	DHI, #2 Rotary Dryer	NONE	EXP CHAMBER	EP12.2			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
22	DHI, #3 Rotary Dryer	NONE	EXP CHAMBER	EP12.3			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
23	DHI, #4 Rotary Dryer	NONE	EXP CHAMBER	EP12.4			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
24	DHI, #5 Rotary Dryer	NONE	EXP CHAMBER	EP12.5			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
25	DHI, #6 Rotary Dryer	NONE	EXP CHAMBER	EP12.6			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
26	DHI, Grain Dryer	71-A-(D)1-S1	BAGHOUSE	EP18.0			Impose $PM_{2.5}$ emission limit	NA	0.037	July 14, 2013
27	DHI, Rotary Dryer	74-A-310-S1	SCRUBBERS	EP40.0			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
28	DHI, Dry End Pick up	NONE	CYCLONE	EP41.0			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
29	DHI, #1 Mill Aerodyne	NONE	HEY CYLONE	EP42.0			permanently cease operation of emission unit(s) or emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner

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ATTACHMENT A - GPC Control Strategy and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID	ADD CONTROL	MODIFY SOURCE CHARACTERISTICS	ESTABLISH OPERATIONAL RESTRICTION	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	EMISSION LIMIT EFFECTIVE DATE (beginning on or before date listed below*)
30	GP1, #1 & #2 Scrubber Units	75-A-087	SCRUBBERS	EP43.1	improve control of current scrubber by changing to higher collection efficiency packing and improving operation	increase stack height from 96 feet to 140 feet.		August 1, 2016	1.140	August 1, 2016
31	GP1, #3 Unit Scrubber	75-A-089	SCRUBBER	EP46.0			permanently cease operation of emission unit(s)/ emission point	April 30, 2015	0.000	April 30, 2015
32	Starch, #7 P&S Dryer	72-A-155	HE CYCLONE	EP59.1			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
33	Starch, #7 P&S Dryer	72-A-155	HE CYCLONE	EP59.2			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
34	Starch, #7 P&S Dryer	72-A-155	HE CYCLONE	EP59.3			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
35	Starch, WHSE, Quonset Bulk Loading	02-A-952	BAGHOUSE	EP60.0				NA	0.068	July 14, 2013
36	Maltrin, #1 Spray Dryer	72-A-199-S1	SCRUBBER	EP66.0		increase stack height from 124 feet to 144 feet		September 1, 2016	0.872	July 14, 2013
37	Maltrin, Product Filter	NONE	BAGHOUSE	EP67.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
38	Maltrin, Dust System Bag Filter	NONE	BAGHOUSE	EP68.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
39	DH3, Primary Dryer (NW)	73-A-137	CYCLONE	EP79.0			permanently cease operation of emission unit(s)/ emission point	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
40	DH3, Primary Dryer (SW)	73-A-138	CYCLONE	EP80.0			permanently cease operation of emission unit(s)/ emission point	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
41	DH3, Primary Dryer (SE)	73-A-139	CYCLONE	EP81.0			permanently cease operation of emission unit(s)/ emission point	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
42	DH3, Primary Dryer (NE)	73-A-140	CYCLONE	EP82.0			permanently cease operation of emission unit(s)/ emission point	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	April 30, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
43	DH2, Mill Aerodyne	73-A-135	AERODYNE	EP85.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
44	Starch, #9 P&S Dryer, #1 Wet Stack	74-A-009	NONE	EP91.1			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
45	Starch, #9 P&S Dryer, #2 Wet Stack	74-A-009	NONE	EP91.2			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
46	Starch, #9 P&S Dryer	74-A-009	AERODYNE	EP91.3			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
47	Starch, #10 P&S Dryer, #1 Wet Stack	74-A-010	NONE	EP92.1			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
48	Starch, #10 P&S Dryer, #2 Wet Stack	74-A-010	NONE	EP92.2			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
49	Starch, #10 P&S Dryer	74-A-010	AERODYNE	EP92.3			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
50	Starch WHSE, So. Bulk Loading	75-A-246-S1	BAGHOUSE	EP95.0				NA	0.068	July 14, 2013
51	WM, #2 Wet Germ Cyclone	74-A-014	CYCLONE	EP96.0				NA	0.013	July 14, 2013
52	WM, #3 Germ Cyclone	74-A-015-S1	CYCLONE	EP97.0				NA	0.134	July 14, 2013
53	Expeller, Dry Germ Cyclone	74-A-016-S2	BAGHOUSE	EP98.0	replace cylone with baghouse	increase stack height from 75 feet to 98.67 feet and slight changes to other stack parameters (diameter, flowrate)		Already Complete	0.034	July 14, 2013
54	Starch, #8 P&S Dryer, #1 Wet Stack	74-A-008	HE CYCLONE	EP101.1			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
55	Starch, #8 P&S Dryer, #2 Wet Stack	74-A-008	HE CYCLONE	EP101.2			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
56	Starch, #8 P&S Dryer	74-A-008	HE CYCLONE	EP101.3			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
57	PH, Blr #8	73-A-191	LNB	EP103.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
58	PH, Blr #9	74-A-159	LNB	EP104.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
59	DH4, #1 Rotary Dryer	75-A-210	EXP CHAMBER	EP108.1			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
60	DH4, #2 Rotary Dryer	75-A-211	EXP CHAMBER	EP108.2			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
61	DH4, #3 Rotary Dryer	75-A-212	EXP CHAMBER	EP108.3			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
62	DH4, #1 Mill Aerodyne	75-A-343-S1	AERODYNE	EP110.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016

ATTACHMENT A - GPC Control Strategy and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID	ADD CONTROL	MODIFY SOURCE CHARACTERISTICS	ESTABLISH OPERATIONAL RESTRICTION	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	EMISSION LIMIT EFFECTIVE DATE (beginning on or before date listed below*)
63	DH4, #2 Mill Aerodyne	75-A-344	AERODYNE	EP111.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
64	DH4, #3 Mill Aerodyne	75-A-345	AERODYNE	EP112.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
65	DH4, # 1 Mill Product	75-A-346-S1	BAGHOUSE	EP113.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
66	DH4, #2 Product Aerodyne	75-A-347	AERODYNE	EP114.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
67	DH4, #3 Product Aerodyne	75-A-348	AERODYNE	EP115.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
68	DH WHSE, #1 Feed Cooler	75-A-353-S1	BAGHOUSE	EP119.0	replace cylone with baghouse	increase stack height from 50 feet to 80 feet. Change stack from vertical obstructed to wertical unobstructed and slight changes to other stack parameters (diameter,flowrate)		Baghouse Already Complete/Stack Modification December 31, 2013	0.100	July 14, 2013
69	Starch, #11 P&S Dryer, #1 Wet Stack	76-A-209	NONE	EP121.1			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
70	Starch, #11 P&S Dryer, #2 Wet Stack	76-A-210	NONE	EP121.2			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
71	Starch, #11 P&S Dryer	76-A-211	HE CYCLONE	EP121.3			permanently cease operation of emission unit(s)/ emission point	December 31, 2016	0.000	December 31, 2016
72	Starch, WHSE, Pearl Starch	76-A-262-S1	BAGHOUSE	EP122.0				NA	0.064	July 14, 2013
73	DH4, #4 Rotary Dryer	79-A-196	EXP CHAMBER	EP125.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner	0.000	March 31, 2015 or no later than 6 months after the start-up of any of the new emission unit associated with Dryer House 5, whichever is sooner
74	WM, #4 Germ Dryer	79-A-195-S1	CYCLONE	EP126.0				NA	0.120	July 14, 2013
75	DH4, #5 Rotary Dryer	09-A-707-S1	EXP CHAMBER	EP 127.0	Add wet scrubber to expansion chamber	increase stack height from 98 feet to 110 feet. Relocate stack to UTM 662038.24, 4584857.17 (NAD 27, Z15) and slight changes to other stack parameters (temp, flowrate, diameter)		November 1, 2016	0.180	November 1, 2016
76	DH4, #4 Mill Aerodyne	80-A-113-S1	AERODYNE	EP128.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
77	DH4, #4 Product Aerodyne	80-A-114-S1	BAGHOUSE	EP129.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
78	Starch WHSE, Bagger Dust Control	02-A-760-S1	BAGHOUSE	EP 130.0				NA	0.030	July 14, 2013
79	Maltrin, #3 Spray Dryer (E)	80-A-149-S4	VENTURI SCRUBBER	EP132.1	improve control of current venturi scrubber by adding packed bed sections and insulating the stack	increase stack height from 126 feet to 150 feet		September 1, 2016	0.900	September 1, 2016
80	Maltrin, #3 Spray Dryer (W)	80-A-150-S4	VENTURI SCRUBBER	EP132.2	improve control of current venturi scrubber by adding packed bed sections and insulating the stack	increase stack height from 126 feet to 150 feet		September 1, 2016	0.900	September 1, 2016
81	CoPo, Disc Dryer Product Handling	NONE	BAGHOUSE	EP 133.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
82	CoPo, Disc Dryer Product Transfer	83-A-082	BAGHOUSE	EP134.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
83	Maltrin #4, Spray Dryer (E)	85-A-031-S1	PB SCRUBBER	EP135.0		increase stack height from 94 feet to 164 feet		September 1, 2016	0.800	July 14, 2013
84	Maltrin #4, Spray Dryer (W)	85-A-032-S1	PB SCRUBBER	EP136.0		increase stack height from 94 feet to 164 feet		September 1, 2016	1.000	July 14, 2013
85	DH4, #6 Rotary Dryer	85-A-033	EXP CHAMBER	EP137.0	Add wet scrubber to expansion chamber	increase stack height from 98 feet to 110 feet. Relocate stack to UTM 662039.93, 4584853.45 (NAD 27, Z15) and slight changes to other stack parameters (temp, flowrate, diameter)		November 1, 2016	0.210	November 1, 2016
86	DH4, #5 Milling Aerodyne	85-A-034	HE CYCLONE	EP138.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
87	DH4, #6 Milling Aerodyne	85-A-035-S1	HE CYCLONE	EP 139.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
88	DH4, #5 Product Aerodyne	85-A-036	HE CYCLONE	EP140.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
89	DH4, #6 Product Aerodyne	85-A-037	AERODYNE	EP141.0			permanently cease operation of emission unit(s)/ emission point	March 31, 2016	0.000	March 31, 2016
90	PH, Boiler #10	85-A-038	LOW EXCESS AIR	EP142.0		increase stack height from 70 feet to 110 feet		December 31, 2013	0.700	July 14, 2013
91	Starch, #1 Flash Dryer	85-A-039	SCRUBBER	EP143.0		increase stack height from 137 feet to 177 feet	Add burner and restrict fuel to natural gas only	December 31, 2016	2.640	July 14, 2013
92	Starch WHSE, Food Grade Bagger	90-A-307	BAGHOUSE	EP144.0	Install new baghouse	increase stack height from 33 feet to 140 feet		Already Complete	0.210	November 1, 2013
93	Starch WHSE, Food Grade Bagger	85-A-041	BAGHOUSE	EP145.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
94	WM, #1-4 Corn Cleaner	85-A-043-S1	BAGHOUSE	EP147.0		increase stack height from 16 feet to 80 feet		No later than 180 days after receiving approval from the Army Corp of Engineers	0.200	July 14, 2013
95	Starch WHSE, #1 Bin Vent	85-A-081-S1	BAGHOUSE	EP149.0				NA	0.020	July 14, 2013
96	Starch WHSE,#2 Bin Vent	85-A-082-S1	BAGHOUSE	EP150.0				NA	0.020	July 14, 2013
97	Starch WHSE, #3 Bin Vent	85-A-083-S1	BAGHOUSE	EP151.0				NA	0.020	July 14, 2013
98	Starch WHSE, #4 Bin Vent	85-A-084-S1	BAGHOUSE	EP152.0				NA	0.020	July 14, 2013
99	PH, Boiler #11	85-A-135	LOW EXCESS AIR	EP153.0		increase stack height from 70 feet to 110 feet		December 31, 2013	0.700	July 14, 2013
100	Maltrin, #1 Agglomerator	89-A-084	BAGHOUSE	EP154.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
101	Starch WHSE, Super Sacker	89-A-085	BAGHOUSE	EP155.0				NA	0.068	July 14, 2013

ATTACHMENT A - GPC Control Strategy and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID	ADD CONTROL	MODIFY SOURCE CHARACTERISTICS	ESTABLISH OPERATIONAL RESTRICTION	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	EMISSION LIMIT EFFECTIVE DATE (beginning on or before date listed below*)
102	Maltrin, #2 Agglomerator	89-A-146	BAGHOUSE	EP156.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
103	Maltrin, bagger	89-A-162-S1	BAGHOUSE	EP157.0				NA	0.057	July 14, 2013
104	Starch, #2 Flash Dryer	90-A-258	SCRUBBER	EP158.0		increase stack height from 139 feet to 179 feet	Add burner and restrict fuel to natural gas only	December 31, 2016	3.550	July 14, 2013
105	Starch WHSE, #5 Starch Silo (N)	90-A-259	BAGHOUSE	EP159.0				NA	0.030	July 14, 2013
106	Starch WHSE, #6 Starch Silo (E)	90-A-260	BAGHOUSE	EP160.0				NA	0.030	July 14, 2013
107	Starch WHSE, #7 Starch Silo (S)	90-A-261	BAGHOUSE	EP161.0				NA	0.030	July 14, 2013
108	Starch WHSE, #8 Starch Silo (W)	90-A-262	BAGHOUSE	EP162.0				NA	0.030	July 14, 2013
109	Starch WHSE, Track 3A Loadout	90-A-263	BAGHOUSE	EP163.0				NA	0.083	July 14, 2013
110	DH4, #7 Rotary Dryer	90-A-264	EXP CHAMBER	EP164.0	Add wet scrubber to expansion chamber	increase stack height from 98 feet to 110 feet. Relocate stack to UTM 662041.71, 4584849.89 (NAD 27, Z15) and slight changes to other stack parameters (temp, flowrate, diameter)		November 1, 2016	0.210	November 1, 2016
111	DH WHSE, #2 Feed Cooler	90-A-111	BAGHOUSE	EP167.0		increase stack height from 19 feet to 80 feet		December 31, 2013	0.110	July 14, 2013
112	Maltrin, #5 Spray Dryer (A Stack)	90-A-309-S1	SCRUBBER	EP168.0		increase stack height from 152 feet to 162 feet		September 1, 2016	0.873	July 14, 2013
113	Maltrin, #5 Spray Dryer (B Stack)	90-A-310-S1	SCRUBBER	EP169.0		increase stack height from 152 feet to 162 feet		September 1, 2016	0.753	July 14, 2013
114	Starch WHSE, #9 Starch Silo (NE)	90-A-359	BAGHOUSE	EP171.0				NA	0.030	July 14, 2013
115	Starch WHSE, #10 Starch Silo (NW)	90-A-360	BAGHOUSE	EP172.0				NA	0.030	July 14, 2013
116	GP2, #4 Gluten Flash Dryer	91-A-067-S2	SCRUBBER	EP173.0				NA	1.010	July 14, 2013
117	GP2, #4 Gluten Pre-Mill	91-A-068-S1	BAGHOUSE	EP174.0				NA	0.150	July 14, 2013
118	Maltrin, Product Silo Receiver (N)	91-A-069	BAGHOUSE	EP175.0				NA	0.035	July 14, 2013
119	Maltrin, Nuisance Duct Collector (W)	91-A-070	BAGHOUSE	EP176.0				NA	0.034	July 14, 2013
120	PH, Boiler #12	93-A-110	LOW NOX BURNERS	EP177.0				NA	1.500	July 14, 2013
121	WM, #5 Germ Dryer	91-A-176	CYCLONE	EP178.0				NA	0.230	July 14, 2013
122	GP2, #1 Feed Truck Loadout (West)	92-A-383-S1	BAGHOUSE	EP179.0		increase stack height from 38 feet to 75 feet and make stack vertical unobstructed instead of vertical obstructed		Already Complete	0.150	July 14, 2013
123	GP2, #2 Feed Truck Loadout (East)	92-A-385	BAGHOUSE	EP180.0		increase stack height from 38 feet to 75 feet and make stack vertical unobstructed instead of vertical obstructed		Already Complete	0.150	July 14, 2013
124	Elevator, South Corn Rail Receiving	76-A-264	BAGHOUSE	EP181.1				NA	0.170	July 14, 2013
125	Elevator, South Corn Truck Receiving	76-A-268	BAGHOUSE	EP181.2				NA	0.125	July 14, 2013
126	Maltrin, #1 Bulk Filter Aid Storage Bin (W)	93-A-032	BAGHOUSE	EP182.0			restrict operation to 1 out of 4 bins may be filled at a time	July 14, 2013	0.010	July 14, 2013
127	Maltrin, #2 Bulk Filter Aid Storage Bin (N)	93-A-033	BAGHOUSE	EP183.0			restrict operation to 1 out of 4 bins may be filled at a time	July 14, 2013	0.010	July 14, 2013
128	Maltrin, #3 Bulk Filter Aid Storage Bin (N)	93-A-034	BAGHOUSE	EP184.0			restrict operation to 1 out of 4 bins may be filled at a time	July 14, 2013	0.010	July 14, 2013
129	Maltrin, #1 Bulk Carbon Storage Bin (W)	93-A-035	BAGHOUSE	EP185.0			restrict operation to 1 out of 4 bins may be filled at a time	July 14, 2013	0.010	July 14, 2013
130	Maltrin, #6 Spray Dryer (Stack A)	94-A-055	SCRUBBER	EP186.0		increase stack height from 137 feet to 147 feet		September 1, 2016	0.663	July 14, 2013
131	Maltrin, #6 Spray Dryer (Stack B)	94-A-061	SCRUBBER	EP187.0		increase stack height from 137 feet to 147 feet		September 1, 2016	0.663	July 14, 2013
132	G-Starch, G-Starch Process	96-A-1028-S1	BAGHOUSE	EP188.0				NA	0.774	July 14, 2013
133	PH, Lime Silo	02-A-759	BIN VENT FILTER	EP189.0				NA	0.012	July 14, 2013
134	GP2, Gluten Loadout Transfer	02-A-781-S1	BAGHOUSE	EP190.1				NA	0.021	July 14, 2013
135	GP2, Gluten Truck Loadout	02-A-782-S1	BAGHOUSE	EP190.2				NA	0.002	July 14, 2013
136	PH, Bulk Salt Tank Vent	02-A-787	BIN VENT FILTER	EP191.0			limit operation to no more than 1 hour per day	July 14, 2013	0.200	July 14, 2013
137	CoPo, Corn Bran Dryer	06-A-215	BAGHOUSE	EP192.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
138	WM, #3 Germ Transfer & Receiving	02-A-783-S1	CYCLONE	EP194.0				NA	0.020	July 14, 2013
139	DH4, Spent Germ Receiving	09-A-482-S1	BAGHOUSE	EP195.0		increase stack height from 30 feet to 66.5 feet		Already Complete	0.028	July 14, 2013
140	DH1, DH2 and DH4 Product Receiver Cyclone	10-A-563	BAGHOUSE	EP196.0	add baghouse to bypass stack			Already Complete	0.140	July 14, 2013
141	Maltrin Hoffman Dust Collection	10-A-285	BAGHOUSE	EP197.0		vent source directly to atmosphere instead of inside production building		Already Complete	0.011	July 14, 2013
142	Germ Receiving Bin	NONE	NONE	EP198.0				NA	0.009	July 14, 2013
143	DH4 & DH5, New Milling Equipment & Product Conv	NONE	BAGHOUSE	EP199.0			replace existing DH4 milling aerodynes with new milling equipment with baghouse controLs	March 1, 2016	0.650	March 1, 2016
144	Starch WHSE, Ind. Modified Starch	03-A-079	BAGHOUSE	EP471.0				NA	0.065	July 14, 2013
145	Elevator, Grain Unloading "A" & "B"	02-A-687-S2	BAGHOUSE	EP490.0				NA	0.220	July 14, 2013
146	GP1, Pneunatic Transport System	03-A-471	BAGHOUSE	EP531.0				NA	0.122	July 14, 2013
147	GP1, Hulls' Milling System	03-A-1369	BAGHOUSE	EP536.0				NA	0.013	July 14, 2013
148	Starch WHSE, Modified Starch Pneumatic	03-A-1370	BAGHOUSE	EP537.0				NA	0.030	July 14, 2013
149	Maltrin, #1 Spray Dryer System Cooler	03-A-1371	BAGHOUSE	EP538.0				NA	0.100	July 14, 2013
150	WWT, #1 Biogas Flare Stack	04-A-548	FLARE	EP542.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
151	WWT, #2 Biogas Flare Stack	04-A-549	FLARE	EP543.0			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
152	Mash Fermenters 1-29	05-A-926-S3	SCRUBBERS	EP544.0				NA	0.185	July 14, 2013
153	Expeller, #1 Spent Germ Pickup	06-A-1261	BAGHOUSES	EP545.0				NA	0.365	July 14, 2013
154	DH4, #3 Alpha Laval (formerly #4 Sharples)	11-A-338	NONE	EP546.0		vent source directly to atmosphere instead of inside production building	replace existing sharples with new alpha laval centrifuge	Already Complete	0.001	July 14, 2013
155	WWTP Anaerobic Digesters #1 - #3	11-A-661	BIOGAS DESULFURIZATION SYSTEM / FLARE	EP548.0			add source to replace EP542.0 and EP543.0	Already Complete	0.260	July 14, 2013
156	Tank 4C and 5C	NONE	FLARE	EP550.0				NA	0.220	July 14, 2013
157	East Tank and C-400 Thru Tanks	NONE	NONE	EP551.0				NA	0.011	July 14, 2013
158	DH5, Swiss Combi Dryer	11-A-339	TO / SO2 SCRUBBER	EP600.0			replace existing DH1, DH2 and portions of DH4 and replace with new DH5	March 31, 2015	2.700	March 31, 2015
159	DH5, Spent Germ Pneumatic Transport	11-A-340	BAGHOUSE	EP601.0			replace existing DH1, DH2 and portions of DH4 and replace with new DH5	March 31, 2015	0.030	March 31, 2015
160	DH5, Cage Mill Feed Baghouse	11-A-342	BAGHOUSE	EP603.0			replace existing DH1, DH2 and portions of DH4 and replace with new DH5	March 31, 2015	0.160	March 31, 2015

ATTACHMENT A - GPC Control Strategy and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID	ADD CONTROL	MODIFY SOURCE CHARACTERISTICS	ESTABLISH OPERATIONAL RESTRICTION	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	EMISSION LIMIT EFFECTIVE DATE (beginning on or before date listed below*)
161	DH5, Building Scrubber	NONE	SCRUBBER	EP605.0			replace existing DH1, DH2 and portions of DH4 and replace with new DH5	March 31, 2015	0.010	March 31, 2015
162	Grnd & Whole Grains Unloading (KENT)	NONE	CYCLONE	E1			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
163	Pellet Cooler (KENT)	NONE	CYCLONE	E2A			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
164	Pellet Cooler (KENT)	NONE	CYCLONE	E2B			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
165	Pellet Cooler (KENT)	NONE	CYCLONE	E2C			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
166	Pellet Screen (KENT)	NONE	CYCLONE	E3			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
167	Pellet Cooler (KENT)	03-A-1414-S3	BAGHOUSE	E4				NA	0.086	July 14, 2013
168	Ingredient Mixer (KENT)	NONE	CYCLONE	E5			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
169	SBM Bin (KENT)	NONE	NONE	E7a			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
170	SBM Bin (KENT)	NONE	NONE	E7b			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
171	SBM Bin (KENT)	NONE	NONE	E7c			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
172	SBM Bin (KENT)	NONE	NONE	E7d			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
173	SBM Bin (KENT)	NONE	NONE	E7e			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
174	SBM Bin (KENT)	NONE	NONE	E7f			limit operation to no more than 1 hour per day	NA	0.020	July 14, 2013
175	Pellet Conveyor (KENT)	NONE	CYCLONE	E8			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
176	Loadout Bins (KENT)	NONE	NONE	E9a			limit operation to no more than 2.5 hours per day	NA	0.077	July 14, 2013
177	Loadout Bins (KENT)	NONE	NONE	E9b			limit operation to no more than 2.5 hours per day	NA	0.077	July 14, 2013
178	Loadout Bins (KENT)	NONE	NONE	E9c			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
179	Loadout Bins (KENT)	NONE	NONE	E9d			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
180	Pellet Cooler (KENT)	03-A-1415-S4	BAGHOUSE	E10				NA	0.034	July 14, 2013
181	Maltrin Storage Bins 1-4 & Kice Product Reciever	NONE	BAGHOUSE/BIN VENT FILTERS	MALT14				NA	0.040	July 14, 2013
182	Maltrin Storage Bins 5-8	NONE	BAGHOUSE/BIN VENT FILTERS	MALT58				NA	0.005	July 14, 2013
183	Sulfur Burner	NONE	ABSORBTION TOWER	SULFURBURN			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
184	Coal Barge Unloading	NONE	NONE	COALBARG			operate only in the months March through November and a minimum daily average coal moisture content of 8.7%	NA	0.060	July 14, 2013
185	Coal Pile	NONE	NONE	COAL PILE			no more than 266,263 tons per 12-month rolling period and a minimum daily average coal moisture content of 8.7%	NA	NA	July 14, 2013
186	Feed Barge Unloading	NONE	TELESCOPING SPOUT	FEEDBARG			operate only in the months March through November	NA	0.020	July 14, 2013
187	Feed Railcar Loading	NONE	SPOUT WITH SOCK	RAILCR1				NA	0.004	July 14, 2013
188	Feed Railcar Loading	NONE	SPOUT WITH SOCK	RAILCR2				NA	0.004	July 14, 2013
189	Wet Feed Loading	NONE	NONE	WETFEED			loadout no more than 37,000 tons of wet feed per 12-month rolling period	NA	0.003	July 14, 2013
190	Corn Storage Pad	NONE	NONE	CORNSTOR			permanently cease operation of emission unit(s)/ emission point	Already Complete	0.000	Already Complete
191	Kent Feeds Flat Corn Storage Pad	NONE	NONE	FLATSTOR			store no more than 26,000 tons of material per 12-month rolling period	NA	0.002	July 14, 2013
192	Haul Roads	NONE	NONE	ND	use PM10 efficient sweeper (a minimum of every other day)		silt loading of no more than 0.4 g/m2	NA	NA	July 14, 2013
193	River Levee	NONE	NONE	NONE			restrict access to levee by posting signs warning of restricted access on the north and south fence lines that intersect the levee. A third sign will be posted in the area of highest modeled concentrations prohibiting loitering and fishing. In-person surveillance of the levy will be conducted by GPC security staff periodically throughout the 24-hour day with documentation as to surveillance time and location.	Already Complete	NA	NA

* If emission unit is operational before emission limit effective date, the date the unit becomes operational is the effective date of the PM2.5 emission limit

ATTACHMENT B - Point Source Characteristics

LINE	SOURCE NAME	EMISSION POINT ID	STACK HEIGHT (feet)	STACK DIAMETER (inches)	STACK ORIENTATION		
1	PH, GEP Stack (Blrs 1-4 and 6-7)	EP001.0	219	180	Vertical, Unobstructed		
2	PH, Ash Silo	EP002.0	164	150	Vertical, Unobstructed		
3	Elevator, Grain Unloading "A"	EP009.0	179	23 x 26	Vertical, Unobstructed	merged stack with EP490.0	
4	WM, #1 Wet Germ Cyclone	EP014.0	56	8 x 13	Vertical, Unobstructed		
5	WM, #1 & #2 Germ Dryers	EP015.0	94	18.5 x 21.5	Vertical, Unobstructed		
6	DH2, Gluten Day Bin	EP038.0	43	12	Vertical, Unobstructed		
7	GP1, #1 & #2 Scrubber Units	EP043.1	140	42	Vertical, Unobstructed		
8	Starch, WHSE, Quonset Bulk Loading	EP060.0	48	12	Horizontal		
9	Maltrin, #1 Spray Dryer	EP066.0	144	36	Vertical, Unobstructed		
10	Starch WHSE, So. Bulk Loading	EP095.0	64	18	Vertical, Unobstructed		
11	WM, #2 Wet Germ Cyclone	EP096.0	53	10.8	Vertical, Unobstructed		
12	WM, #3 Germ Cyclone	EP097.0	84	18	Vertical, Unobstructed		
13	Expeller, Dry Germ Cyclone	EP098.0	98.7	14	Vertical, Unobstructed		
14	DH WHSE, #1 Feed Cooler	EP119.0	80	24	Vertical, Unobstructed		
15	Starch WHSE, Pearl Starch Storage Bin	EP122.0	110	12 x 16	Horizontal		
16	WM, #4 Germ Dryer	EP126.0	75	18	Vertical, Unobstructed		
17	DH4, #5 Rotary Dryer	EP127.0	110	36	Vertical, Unobstructed		
18	Starch WHSE, Bagger Dust Control	EP130.0	90	18	Horizontal		
19	Maltrin, #3 Spray Dryer	EP132.1	150	42	Vertical, Unobstructed		
20	Maltrin, #3 Spray Dryer	EP132.2	150	42	Vertical, Unobstructed		
21	Maltrin, #4 Spray Dryer	EP135.0	164	42	Vertical, Unobstructed		
22	Maltrin, #4 Spray Dryer	EP136.0	164	42	Vertical, Unobstructed		
23	DH4, #6 Rotary Dryer	EP137.0	110	36	Vertical, Unobstructed		
24	PH, Boiler #10	EP142.0	110	60	Vertical, Unobstructed		
25	Starch, #1 Flash Dryer	EP143.0	177	96	Vertical, Unobstructed		
26	Starch WHSE, Food Grade Bagger	EP144.0	140	36	Vertical, Unobstructed		
27	Elevator, Grain Unloading "B"	EP146.0	179	24 x 30	Vertical, Unobstructed	merged stack with EP490.0	
28	WM, #1-4 Corn Cleaner	EP147.0	80	30	Vertical, Unobstructed		
29	Starch WHSE, Food Grade Silo, #1 Bin Vent	EP149.0	117	10	Horizontal		
30	Starch WHSE, Food Grade Silo, #2 Bin Vent	EP150.0	117	10	Horizontal		
31	Starch WHSE, Food Grade Silo, #3 Bin Vent	EP151.0	117	10	Horizontal		
32	Starch WHSE, Food Grade Silo, #4 Bin Vent	EP152.0	117	10	Horizontal		
33	PH, Boiler #11	EP153.0	110	60	Vertical, Unobstructed		
34	Starch WHSE, Super Sacker	EP155.0	112	24	Vertical, Unobstructed		
35	Maltrin, Bagger	EP157.0	83	12	Horizontal		
36	Starch, #2 Flash Dryer	EP158.0	179	96	Vertical, Unobstructed		
37	Starch WHSE, #5 Starch Silo (N)	EP159.0	94	12	Horizontal		
38	Starch WHSE, #6 Starch Silo (E)	EP160.0	94	12	Horizontal		
39	Starch WHSE, #7 Starch Silo (S)	EP161.0	94	12	Horizontal		
40	Starch WHSE, #8 Starch Silo (W)	EP162.0	94	12	Horizontal		
41	Starch WHSE, Track 3A Loadout	EP163.0	92	12 x 15	Horizontal		
42	DH4, #7 Rotary Dryer	EP164.0	110	36	Vertical, Unobstructed		
43	DH WHSE, #2 Feed Cooler	EP167.0	80	27	Vertical, Unobstructed		
44	Maltrin, #5 Spray Dryer	EP168.0	162	48	Vertical, Unobstructed		
45	Maltrin, #5 Spray Dryer	EP169.0	162	48	Vertical, Unobstructed		
46	Starch WHSE, #9 Starch Silo (NE)	EP171.0	94	12	Horizontal		
47	Starch WHSE, #10 Starch Silo (NW)	EP172.0	94	12	Horizontal		
48	GP2, #4 Gluten Flash Dryer	EP173.0	148	80	Vertical, Unobstructed		
49	GP2, #4 Gluten Pre-Mill Cooling System	EP174.0	82	18	Vertical, Unobstructed		
50	Maltrin, Product Silo Receiver (N)	EP175.0	162	12	Vertical, Obstructed		
51	Maltrin, Nuisance Duct Collector (W)	EP176.0	99	18	Vertical, Unobstructed		
52	PH, Boiler #12	EP177.0	117	72	Vertical, Unobstructed		
53	WM, #5 Germ Dryer	EP178.0	65	24	Vertical, Unobstructed		
54	GP2, #1 Feed Truck Loadout (West)	EP179.0	75	30	Vertical, Unobstructed		
55	GP2, #2 Feed Truck Loadout (East)	EP180.0	75	30	Vertical, Unobstructed		
56	Elevator, South Corn Rail Receiving	EP181.1	11	34 x 46	Vertical, Obstructed		
57	Elevator, South Corn Truck Receiving	EP181.2	32	28 x 38	Vertical, Obstructed		
58	Maltrin, #1 Bulk Filter Aid Storage Bin (W)	EP182.0	90	18	Vertical, Obstructed		
59	Maltrin, #2 Bulk Filter Aid Storage Bin (N)	EP183.0	90	18	Vertical, Obstructed		
60	Maltrin, #3 Bulk Filter Aid Storage Bin (N)	EP184.0	90	18	Vertical, Obstructed		
61	Maltrin, #1 Bulk Carbon Storage Bin (W)	EP185.0	90	18	Vertical, Obstructed		
62	Maltrin, #6 Spray Dryer	EP186.0	147	72	Vertical, Unobstructed		
63	Maltrin, #6 Spray Dryer	EP187.0	147	72	Vertical, Unobstructed		
64	G-Starch, G-Starch Process	EP188.0	140	54	Vertical, Unobstructed		
65	PH, Lime Silo	EP189.0	29	7.5 x 12	Vertical, Obstructed		
66	GP2, Gluten Loadout Transfer	EP190.1	77	10	Downward		
67	GP2, Gluten Truck Loadout	EP190.2	75	6	Horizontal		
68	PH, Bulk Salt Tank Vent	EP191.0	38	24	Vertical, Obstructed		
69	WM, #3 Germ Transfer & Receiving	EP194.0	68	24	Vertical, Unobstructed		
70	DH4, Spent Germ Receiving	EP195.0	66.5	12	Vertical, Unobstructed		
71	DH1, DH2 and DH4 Product Receiver Cyclone	EP196.0	82.67	22	Vertical, Unobstructed		
72	Maltrin Hoffman Dust Collection	EP197.0	40	4	Horizontal		
73	Germ Receiving Bin	EP198.0	49.5	10.6 x 10.6	Vertical, Unobstructed		
74	DH4, New Milling Unit	EP199.0	160	48	Vertical, Unobstructed		
75	Starch WHSE, Ind. Modified Starch	EP471.0	111	16	Vertical, Obstructed		
76	Elevator, Grain Unloading "A" & "B"	EP490.0	179	42	Vertical, Unobstructed		
77	GP1, Pneunatic Transport System	EP531.0	60	24	Vertical, Unobstructed		
78	GP1, Hulls' Milling System	EP536.0	50	18	Vertical, Unobstructed		
79	Starch WHSE, Modified Starch Pneumatic	EP537.0	36	4	Downward		
80	Maltrin, #1 Spray Dryer System Cooler	EP538.0	97	26	Vertical, Unobstructed		
81	Mash Fermenters 1-29	EP544.0	50	30	Vertical, Unobstructed		
82	Expeller, #1 Spent Germ Pickup	EP545.0	95	36	Vertical, Unobstructed		

ATTACHMENT B - Point Source Characteristics

LINE	SOURCE NAME	EMISSION POINT ID	STACK HEIGHT (feet)	STACK DIAMETER (inches)	STACK ORIENTATION		
83	DH4, #3 Alpha Laval (formerly #4 Sharples)	EP546.0	25	6	Vertical, Unobstructed		
84	WWTP Anaerobic Digesters #1 - #3	EP548.0	35	24	Vertical, Unobstructed		
85	Tank 4C and 5C	EP550.0	30	8	Vertical, Unobstructed		
86	East Tank & C-400 Thrus Tank	EP551.0	69	6	Vertical, Unobstructed		
87	DH5 Swiss Combi Dryer	EP600.0	155	76	Vertical, Unobstructed		
88	DH5 Spent Germ Pneumatic Transport	EP601.0	123	8	Vertical, Unobstructed		
89	Cage Mill Feed Baghouse	EP603.0	123	24	Vertical, Unobstructed		
90	DH5 Bldg Scrubber	EP605.0	123	30	Vertical, Unobstructed		
91	Pellet Cooler (KENT)	E10	60	18	Vertical, Unobstructed		
92	Pellet Cooler (KENT)	E4	46	18	Vertical, Unobstructed		
93	SBM Bin (KENT)	E7A	42	18	Vertical, Obstructed		
94	SBM Bin (KENT)	E7B	42	18	Vertical, Obstructed		
95	SBM Bin (KENT)	E7C	42	18	Vertical, Obstructed		
96	SBM Bin (KENT)	E7D	50	18	Vertical, Obstructed		
97	SBM Bin (KENT)	E7E	50	18	Vertical, Obstructed		
98	SBM Bin (KENT)	E7F	50	18	Vertical, Obstructed		
99	Loadout Bins (KENT)	E9A	40	18	Vertical, Obstructed		
100	Loadout Bins (KENT)	E9B	40	18	Vertical, Obstructed		

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Attachment C - Performance Test List

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID
1	GEP Stack (Blrs 1-4 and 6-7)	NONE	MULTICLONES / ESP ON BOILER 7 ONLY	EP1.0
2	PH, Ash Silo	77-A-357-S1	BAGHOUSE	EP2.0
3	WM, #1 Wet Germ Cyclone	NONE	CYCLONE	EP14.0
4	WM, #1 & #2 Germ Dryers	79-A-194-S1	CYCLONE	EP15.0
5	DH2, Gluten Day Bin	71-A-067-S3	BAGHOUSE	EP38.0
6	GP1, #1 & #2 Scrubber Units	75-A-087	SCRUBBERS	EP43.1
7	Starch, WHSE, Quonset Bulk Loading	02-A-952	BAGHOUSE	EP60.0
8	Maltrin, #1 Spray Dryer	72-A-199-S1	SCRUBBER	EP66.0
9	Starch WHSE, So. Bulk Loading	75-A-246-S1	BAGHOUSE	EP95.0
10	WM, #2 Wet Germ Cyclone	74-A-014	CYCLONE	EP96.0
11	WM, #3 Germ Cyclone	74-A-015-S1	CYCLONE	EP97.0
12	Expeller, Dry Germ Cyclone	74-A-016-S2	BAGHOUSE	EP98.0
13	DH WHSE, #1 Feed Cooler	75-A-353-S1	BAGHOUSE	EP119.0
14	Starch, WHSE, Pearl Starch	76-A-262-S1	BAGHOUSE	EP122.0
15	WM, #4 Germ Dryer	79-A-195-S1	CYCLONE	EP126.0
16	DH4, #5 ROTARY DRYER	09-A-707-S1	EXP CHAMBER	EP 127.0
17	Starch WHSE, Bagger Dust Control	02-A-760-S1	BAGHOUSE	EP 130.0
18	Maltrin, #3 Spray Dryer (E)	80-A-149-S4	VENTURI SCRUBBER	EP132.1
19	Maltrin, #3 Spray Dryer (W)	80-A-150-S4	VENTURI SCRUBBER	EP132.2
20	Maltrin #4, Spray Dryer (E)	85-A-031-S1	PB SCRUBBER	EP135.0
21	Maltrin #4, Spray Dryer (W)	85-A-032-S1	PB SCRUBBER	EP136.0
22	DH4, #6 Rotary Dryer	85-A-033	EXP CHAMBER	EP137.0
23	PH, Boiler #10	85-A-038	LOW EXCESS AIR	EP142.0
24	Starch, #1 Flash Dryer	85-A-039	SCRUBBER	EP143.0
25	Starch WHSE, Food Grade Bagger	90-A-307	BAGHOUSE	EP144.0
26	WM, #1-4 Corn Cleaner	85-A-043-S1	BAGHOUSE	EP147.0
27	Starch WHSE, #1 Bin Vent	85-A-081-S1	BAGHOUSE	EP149.0
28	Starch WHSE,#2 Bin Vent	85-A-082-S1	BAGHOUSE	EP150.0
29	Starch WHSE, #3 Bin Vent	85-A-083-S1	BAGHOUSE	EP151.0
30	Starch WHSE, #4 Bin Vent	85-A-084-S1	BAGHOUSE	EP152.0
31	PH, Boiler #11	85-A-135	LOW EXCESS AIR	EP153.0
32	Starch WHSE, Super Sacker	89-A-085	BAGHOUSE	EP155.0
33	Maltrin, bagger	89-A-162-S1	BAGHOUSE	EP157.0
34	Starch, #2 Flash Dryer	90-A-258	SCRUBBER	EP158.0
35	Starch WHSE, #5 Starch Silo (N)	90-A-259	BAGHOUSE	EP159.0
36	Starch WHSE, #6 Starch Silo (E)	90-A-260	BAGHOUSE	EP160.0
37	Starch WHSE, #7 Starch Silo (S)	90-A-261	BAGHOUSE	EP161.0
38	Starch WHSE, #8 Starch Silo (W)	90-A-262	BAGHOUSE	EP162.0
39	Starch WHSE, Track 3A Loadout	90-A-263	BAGHOUSE	EP163.0
40	DH4, #7 Rotary Dryer	90-A-264	EXP CHAMBER	EP164.0
41	DH WHSE, #2 Feed Cooler	90-A-111	BAGHOUSE	EP167.0
42	Maltrin, #5 Spray Dryer (A Stack)	90-A-309-S1	SCRUBBER	EP168.0
43	Maltrin, #5 Spray Dryer (B Stack)	90-A-310-S1	SCRUBBER	EP169.0
44	Starch WHSE, #9 Starch Silo (NE)	90-A-359	BAGHOUSE	EP171.0
45	Starch WHSE, #10 Starch Silo (NW)	90-A-360	BAGHOUSE	EP172.0
46	GP2, #4 Gluten Flash Dryer	91-A-067-S2	SCRUBBER	EP173.0
47	GP2, #4 Gluten Pre-Mill	91-A-068-S1	BAGHOUSE	EP174.0
48	Maltrin, Product Silo Receiver (N)	91-A-069	BAGHOUSE	EP175.0
49	Maltrin, Nuisance Duct Collector (W)	91-A-070	BAGHOUSE	EP176.0
50	PH, Boiler #12	93-A-110	LOW NOX BURNERS	EP177.0
51	WM, #5 Germ Dryer	91-A-176	CYCLONE	EP178.0
52	GP2, #1 Feed Truck Loadout (West)	92-A-383-S1	BAGHOUSE	EP179.0
53	GP2, #2 Feed Truck Loadout (East)	92-A-385	BAGHOUSE	EP180.0
54	Elevator, South Corn Rail Receiving	76-A-264	BAGHOUSE	EP181.1
55	Elevator, South Corn Truck Receiving	76-A-268	BAGHOUSE	EP181.2
56	Maltrin, #1 Bulk Filter Aid Storage Bin (W)	93-A-032	BAGHOUSE	EP182.0
57	Maltrin, #2 Bulk Filter Aid Storage Bin (N)	93-A-033	BAGHOUSE	EP183.0
58	Maltrin, #3 Bulk Filter Aid Storage Bin (N)	93-A-034	BAGHOUSE	EP184.0
59	Maltrin, #1 Bulk Carbon Storage Bin (W)	93-A-035	BAGHOUSE	EP185.0
60	Maltrin, #6 Spray Dryer (Stack A)	94-A-055	SCRUBBER	EP186.0

Attachment C - Performance Test List

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EMISSION POINT ID
61	Maltrin, #6 Spray Dryer (Stack B)	94-A-061	SCRUBBER	EP187.0
62	G-Starch, G-Starch Process	96-A-1028-S1	BAGHOUSE	EP188.0
63	PH, Lime Silo	02-A-759	BIN VENT FILTER	EP189.0
64	GP2, Gluten Loadout Transfer	02-A-781-S1	BAGHOUSE	EP190.1
65	GP2, Gluten Truck Loadout	02-A-782-S1	BAGHOUSE	EP190.2
66	PH, Bulk Salt Tank Vent	02-A-787	BIN VENT FILTER	EP191.0
67	WM, #3 Germ Transfer & Receiving	02-A-783-S1	CYCLONE	EP194.0
68	DH4, Spent Germ Receiving	09-A-482-S1	BAGHOUSE	EP195.0
69	DH1, DH2 and DH4 Product Receiver Cyclone	10-A-563	BAGHOUSE	EP196.0
70	Maltrin Hoffman Dust Collection	10-A-285	BAGHOUSE	EP197.0
71	Germ Receiving Bin	NONE	NONE	EP198.0
72	DH4, New Milling Unit	NONE	BAGHOUSE	EP199.0
73	Starch WHSE, Ind. Modified Starch	03-A-079	BAGHOUSE	EP471.0
74	Elevator, Grain Unloading "A" & "B"	02-A-687-S2	BAGHOUSE	EP490.0
75	GP1, Pneunatic Transport System	03-A-471	BAGHOUSE	EP531.0
76	GP1, Hulls' Milling System	03-A-1369	BAGHOUSE	EP536.0
77	Starch WHSE, Modified Starch Pneumatic	03-A-1370	BAGHOUSE	EP537.0
78	Maltrin, #1 Spray Dryer System Cooler	03-A-1371	BAGHOUSE	EP538.0
79	Mash Fermenters 1-29	05-A-926-S3	SCRUBBERS	EP544.0
80	Expeller, #1 Spent Germ Pickup	06-A-1261	BAGHOUSES	EP545.0
81	DH4, #3 Alpha Laval (formerly #4 Sharples)	11-A-338	NONE	EP546.0
82	WWTP Anaerobic Digesters #1 - #3	11-A-661	BIOGAS DESULFURIZATION FLARE	EP548.0
83	Tank 4C and 5C	NONE	FLARE	EP550.0
84	East Tank and C-400 Thru Tanks	NONE	NONE	EP551.0
85	DH5, Swiss Combi Dryer	11-A-339	TO / SO2 SCRUBBER	EP600.0
86	DH5, Spent Germ Pneumatic Transport	11-A-340	BAGHOUSE	EP601.0
87	DH5, Cage Mill Feed Baghouse	11-A-342	BAGHOUSE	EP603.0
88	DH5, Building Scrubber	NONE	SCRUBBER	EP605.0
89	Pellet Cooler (KENT)	03-A-1414-S3	BAGHOUSE	E4
90	SBM Bin (KENT)	NONE	NONE	E7a
91	SBM Bin (KENT)	NONE	NONE	E7b
92	SBM Bin (KENT)	NONE	NONE	E7c
93	SBM Bin (KENT)	NONE	NONE	E7d
94	SBM Bin (KENT)	NONE	NONE	E7e
95	SBM Bin (KENT)	NONE	NONE	E7f
96	Loadout Bins (KENT)	NONE	NONE	E9a
97	Loadout Bins (KENT)	NONE	NONE	E9b
98	Pellet Cooler (KENT)	03-A-1415-S4	BAGHOUSE	E10
99	Maltrin Storage Bins 1-4	NONE	BAGHOUSE/BIN VENT FILTERS	MALT14
100	Maltrin Storage Bins 5-8	NONE	BAGHOUSE/BIN VENT FILTERS	MALT58
101	Coal Barge Unloading	NONE	NONE	COALBARG
102	Coal Pile	NONE	NONE	COAL PILE
103	Feed Barge Unloading	NONE	TELESCOPING SPOUT	FEEDBARG
104	Feed Railcar Loading	NONE	SPOUT WITH SOCK	RAILCR1
105	Feed Railcar Loading	NONE	SPOUT WITH SOCK	RAILCR2
106	Wet Feed Loading	NONE	NONE	WETFEED
107	Kent Feeds Flat Corn Storage Pad	NONE	NONE	FLATSTOR
108	Haul Roads	NONE	NONE	ND

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Summary of Work Practices for Attachment D

EP	Name	Control Device	Operation Requirement	Currently Implemented ?	Duration	O&M Plan?	Description	Currently Implemented ?
1.0	GEP Stack, Boiler #7 ESP	ESP	#7 Primary 20-40 KV	Yes	1x shift	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	GEP Stack, Boiler #7 ESP	ESP	#7 Secondary 100-400 mA	Yes	1x shift	CAM		
	GEP Stack, Boiler #6 ESP	CL	#6 DP 1" - 5"	Yes	Continious	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	GEP Stack, Boiler #6 ESP	CL	#6 & #7 Airlocks for rotation	Yes	1x shift	CAM		
	GEP Stack, Boiler #6 ESP	CL	#1 - #4 Discharge Hoppers	Yes	1x shift	CAM		Yes
	GEP Stack, Multi Clones	MC	Walk through	Yes	1x shift	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	GEP Stack		Continuous Opacity Monitor	Yes	continuous	Yes	Daily Inspections/Quarterly Maintenance and RATA	Yes
2.0	PH Ash Silo	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
14.0	WM #1 Wet Germ Cyclone	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
15.0	WM, #1 & #2 Germ Dryers	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
38.0	DH2, Gluten Day Bin	BH	No Visible Emissions	No / 2014	1x dayshift	No		
43.1	GP1 #1 Gluten Flash Dryer	SC	Scrubber Flow, minimum 100 gpm	Yes	1x day shift	CAM		Yes
		SC	Pressure drop, minimum 1" of H2O	Yes	1x day shift	CAM		Yes
60.0	Quonset (Track 3&4 N Starch) Bulk Loadout	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
66.0	#1 Maltrin SD	SC	Scrubber Flow, minimum 175 gpm	Yes	continuous	CAM		Yes
	#1 Maltrin SD	SC	Pressure drop, minimum 0.25" of H2O	Yes	continuous	CAM		Yes
95.0	Starch Track 3 south Starch Bulk Loading	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
96.0	WM, #2 Wet Germ Cyclone	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
97.0	WM, #3 Germ Cyclone	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
98.0	Expeller, Dry Germ Baghouse	BH	Differential Pressure 1" - 6"	Yes	1x dayshift	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
119.0	DHWH #1 Product Cooler	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
122.0	Pearl Starch Storage	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
126.0	WM, #4 Germ Dryer	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
127.0	DH4, #5 Rotary Dryer	EC	Equipment Walk through	Yes	1x/day	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
			Stub Feed not to Exceed 28.9 RPM (1 hour average)	Yes	continuous			
		SC	Scrubber Flow and pressure drop	No / 2016	continuous	No		No / 2016
130.0	Starch Industrial Bagger	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic inspection and Maintenance of Bag Filters	Yes
130.0	Starch Industrial Bagger	BH	Pressure Differential 1" - 6" H2O	Yes	1x dayshift	CAM		Yes
132.1	#3 Maltrin Spray Dryer East	SC	Scrubber Flow, minimum 60 gpm	Yes	continuous	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
132.2	#3 Maltrin Spray Dryer West	SC	Scrubber Flow, minimum 60 gpm	Yes	continuous	CAM		Yes
135.0	#4 Maltrin Spray Dryer East	SC	Scrubber Flow, minimum 400 gpm	Yes	continuous	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	#4 Maltrin Spray Dryer East	SC	Pressure drop, minimum 0.3" of H2O	Yes	continuous	CAM		Yes
136.0	#4 Maltrin Spray Dryer West	SC	Scrubber Flow, minimum 400 gpm	Yes	continuous	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	#4 Maltrin Spray Dryer West	SC	Pressure drop, minimum 0.3" of H2O	Yes	continuous	CAM		
137.0	DH4, #6 Rotary Dryer	EC/SC	Equipment Walk through	Yes	1x/day	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
		SC	Scrubber Flow and pressure drop	No / 2016	continuous			No / 2016
142.0	PH, Boiler #10	none		No				No
143.0	Starch, #1 Flash Dryer	SC	Scrubber recycle pressure 40 -50 psig	Yes	1x/day	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
144.0	Starch WHSE, Food Grade Bagger	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filters	Yes
147.0	Corn Cleaners 1,2,3,4 + Corn Day Bin	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filters	Yes
149.0	Starch Food Grade Silo #1	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
150.0	Starch Food Grade Silo #2	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
151.0	Starch Food Grade Silo #3	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
152.0	Starch Food Grade Silo #4	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
153.0	PH, Boiler #11	none		No		No		No
155.0	Starch WHSE, Super Sacker	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
157.0	Maltrin Bagger (Supersacker)	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
158.0	Starch, #2 Flash Dryer	SC	Scrubber Flow, minimum 600 gpm	Yes	1x dayshift	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
159.0	Starch WHSE, #5 Starch Silo (N)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
160.0	Starch WHSE, #6 Starch Silo (E)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
161.0	Starch WHSE, #7 Starch Silo (S)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
162.0	Starch WHSE, #8 Starch Silo (W)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
163.0	Starch WHSE, Track 3A Loadout	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
164.0	DH4, #7 Rotary Dryer	EC	Equipment Walk through	Yes	1x/day	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
		SC	Scrubber Flow and pressure drop	No / 2016	continuous	No		No / 2016
167.0	DH WHSE, #2 Feed Cooler	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
168.0	#5 Maltrin Spray Dryer A Stack	SC	Scrubber Flow, minimum 600 gpm	Yes	continuous	CAM		Yes
	#5 Maltrin Spray Dryer A Stack	SC	Pressure drop, minimum 1.8" of H2O	Yes	continuous	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	#5 Maltrin Spray Dryer A Stack	SC	Operated less than 6,667 hr/rolling 12 months	Yes	Daily	CAM		Yes
169.0	#5 Maltrin Spray Dryer B Stack	SC	Scrubber Flow, minimum 600 gpm	Yes	continuous	CAM		Yes
	#5 Maltrin Spray Dryer B Stack	SC	Pressure drop, minimum 1.8" of H2O	Yes	continuous	CAM		Yes
	#5 Maltrin Spray Dryer B Stack	SC	Operated less than 6,667 hr/rolling 12 months	Yes	monthly	CAM		Yes
171.0	Starch WHSE, #9 Starch Silo (NE)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
172.0	Starch WHSE, #10 Starch Silo (NW)	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
173.0	GP2 #4 Gluten Flash Dryer	SC	Scrubber Flow, Operation	Yes	Continuous	Yes	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes

173.0	GP2 #4 Gluten Flash Dryer	SC	Scrubber Flow, minimum 400 gpm	Yes	Continious	CAM		Yes
		SC	Pressure drop, minimum 2.8 " of H2O	Yes	Continious	CAM		Yes
		SC	pH, minimum 5.2	Yes	Continious	CAM		Yes
174.0	#4 Gluten Pre-Mill Cooling System	BH	No Visible Emissions	Yes	1x dayshift	CAM		Yes
175.0	Maltrin, Product Silo Receiver (N)	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
176.0	Maltrin, Nuisance Duct Collector (W)	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
177.0	PH, Boiler #12	LONOX	Continuous NO2 Monitor	Yes	Continuous	Yes	Daily Inspections/Quarterly Maintenance and RATA	Yes
178.0	WM, #5 Germ Dryer	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		
179.0	GP2, #1 Feed Truck Loadout (West)	BH	No Visible Emissions	No /2014	1x dayshift	Yes	Equipment Walk through/ DP Gauges	Yes
180.0	GP2, #2 Feed Truck Loadout (East)	BH	No Visible Emissions	No/2014	1x dayshift	Yes	Equipment Walk through/ DP Gauges	Yes
181.1	Elevator, South Corn Rail Receiving	BH	Equipment Walk through	Yes	1x dayshift	Yes	Daily Walk Through; Monthly Baghouse Inspection	Yes
181.2	Elevator, South Corn Truck Receiving	BH	Equipment Walk through	Yes	1x dayshift	Yes	Daily Walk Through; Monthly Baghouse Inspection	Yes
182.0	Maltrin, #1 Bulk Filter Aid Storage Bin (W)	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
183.0	Maltrin, #2 Bulk Filter Aid Storage Bin (N)	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
184.0	Maltrin, #3 Bulk Filter Aid Storage Bin (N)	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
185.0	Maltrin, #1 Bulk Carbon Storage Bin (W)	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
186.0	#6 Maltrin Spray Dryer A Stack	SC	Scrubber Flow, minimum 900 gpm	Yes	continuous	CAM	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	Yes
	#6 Maltrin Spray Dryer A Stack	SC	Pressure drop, minimum 1.4 " of H2O	Yes	continuous	CAM		Yes
187.0	#6 Maltrin Spray Dryer B Stack	SC	Scrubber Flow, minimum 900 gpm	Yes	continuous	CAM		Yes
	#6 Maltrin Spray Dryer B Stack	SC	Pressure drop, minimum 1.4 " of H2O	Yes	continuous	CAM		Yes
188.0	G-Starch, G-Starch Process	BH	No Visible Emissions	Yes	1x dayshift	Yes	Daily Inspection; Routine Baghouse Maintenance	Yes
	G-Starch, G-Starch Process	BH	Operated less than 5,843 hr/rolling 12 months	Yes	daily			
189.0	PH, Lime Silo	BVF	No Visible Emissions during fill	No / 2014	1x at fill	Yes	Daily Inspection; Routine Baghouse Maintenance	Yes
190.1	GP2, Gluten Loadout Transfer	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Equipment Walk through/ DP Gauges	Yes
190.2	GP2, Gluten Truck Loadout	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Equipment Walk through/ DP Gauges	Yes
191.0	PH, Bulk Salt Tank Vent	BVF	No Visible Emissions during fill	No / 2014	1x at fill	Yes	Daily Inspection; routine Baghouse Maintenance	Yes
194.0	WM, #3 Germ Transfer & Receiving	CY	Inspect Discharge Hoppers	Yes	1x dayshift	No		No
195.0	DH4, Spent Germ Receiving	BH	Differential Pressure 6"<>0.3"	Yes	Continuous	Yes	Daily Inspection; routine Baghouse Maintenance	Yes
196.0	DH1, DH2 and DH4 Product Receiver Cyclone	BH	Differential Pressure 10"<>0.3"	Yes	Continuous	Yes	Differential Pressure 10"<>0.3"; Routine and Long term Maintenance per Manufacturer's Recommendation	Yes
197.0	Maltrin Hoffman Dust Collection	BH	Walk Through	Yes	1x day	Yes	Differential Pressure 8"<>1"; Routine and Long term Maintenance per Manufacturer's Recommendation	Yes
			Differential Pressure 1" - 8"	Yes	Continuous			
198.0	Germ Receiving Bin	none	No Visible Emissions	No / 2014	1x dayshift	No	Maintain Integrity	No
199.0	DH4, New Milling Unit	BH	No Visible Emissions	No / 2014	1x dayshift	No	Daily Inspections/Annual Maintenance/ Preventative Maintenance will be automatically initiated using GPC's MARCAM maintenance system.	No / 2016
471.0	Starch WHSE, Ind. Modified Starch	BH	Equipment Walk through/DP	Yes	1x dayshift	Yes		
490.0	Elevator Corn Unloading A, B, C	BH	No Visible Emissions	Yes	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
531.0	GP1 Transport System	BH	No Visible Emissions	Yes	1x dayshift	CAM		
536.0	GP1 Hulls Milling System	BH	No Visible Emissions	Yes	1x dayshift	CAM		
538.0	Maltrin #1 Spray Dryer System Cooler	BH	No Visible Emissions	Yes	1x dayshift	CAM		
544.0	Mash Fermenters 1-29	SC	Operation according to mfg specification	Yes	Continuous	Yes	Maintain Scrubbers to manufacturers specification; maintain records	Yes
545.0	Expeller, #1 Spent Germ Pickup	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Daily Inspection; Routine Baghouse Maintenance	Yes
546.0	DH4, #3 Alpha Laval (formerly #4 Sharples)	BH	No Visible Emissions	No / 2014	1x dayshift	No		
548.0	WWTP Anaerobic Digesters #1 - #3	FLARE	No Visible Emissions When in Operation	No / 2014	1x dayshift	Yes	Daily Inspection, Annual Preventative Maintenance	Yes
550.0	Tank 4C and 5C	FLARE	No Visible Emissions When in Operation	No / 2014	1x dayshift	No		

551.0	East Tank and C-400 Thru Tanks	none	none	No		No		
600.0	DH5, Swiss Combi Dryer	SC	Scrubber flowrate, pH	No / 2015	Continuous	No	Manufacturers operation and maintenance schedule	No / 2015
	DH5, Swiss Combi Dryer	TO	Temperature	No / 2015	Continuous	No	Manufacturers operation and maintenance schedule	No / 2015
601.0	DH5, Spent Germ Pneumatic Transport	BH	Differential Pressure Drop Measurement	No / 2015	Continuous	No	Manufacturers operation and maintenance schedule	No / 2015
603.0	DH5, Cage Mill Feed Baghouse	BH	Differential Pressure Drop Measurement	No / 2015	Continuous	No	Manufacturers operation and maintenance schedule	No / 2015
605.0	DH5, Building Scrubber	SC	Scrubber flow rate, pH	No / 2015	Continuous	No	Manufacturers operation and maintenance schedule	No / 2015
E4	Pellet Cooler (KENT)	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
E7a	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E7b	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E7c	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E7d	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E7e	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E7f	SBM Bin (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E9a	Loadout Bins (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E9b	Loadout Bins (KENT)	BVF	No Visible Emissions During Fill	No	During fills	No	Maintain Integrity	Yes
E10	Pellet Cooler (KENT)	BH	No Visible Emissions	No / 2014	1x dayshift	Yes	Periodic Inspection and Maintenance of Bag Filter	Yes
MALT14	Maltrin Storage Bins 1-4	BH/BVF	No Visible Emissions Outside of Building	No	1x dayshift	No		
MALT58	Maltrin Storage Bins 5-8	BVF	No Visible Emissions Outside of Building	No	1x dayshift	No		
COALBRG	Coal Barge Unloading	none	Only occurs March to October	No	record operating time	No		
COAL PILE	Coal Pile	none	No fugitive emissions beyond property line	No	1x dayshift	No		
FEEDBARG	Feed Barge Unloading	none	Maintain spout extension and keep non-use openings shut	No / 2014	1x at fill	No		
RAILCR1	Feed Railcar Loading	none	Maintain spout extension and keep non-use openings shut	No / 2014	1x at fill	No		
RAILCR2	Feed Railcar Loading	none	Maintain spout extension and keep non-use openings shut	No / 2014	1x at fill	No		
WETFEED	Wet Feed Loading	none	No Visible Emissions	No / 2014	1x dayshift	No		
FLATSTOR	Kent Feeds Flat Corn Storage Pad	none	No Visible Emissions Outside of Building	No / 2014	1x dayshift	No		
ROADS	Haul Roads	none	Sweep main roads daily, except during and immediately following precipitation events	Yes	1x dayshift	Yes	Daily cleaning of main raods	Yes

Attachment C. Implementation Schedule for GPC Control Measures

Information Supporting GPC's Schedule for Implementation of Control Measures
Updated January 2014

Action	Date	Completion Schedule Rationale & Comments
Increase stack height of #1 & #2 Crown Coolers 30 feet to 80 feet EP 119.0 & EP 167.0	December 31, 2013	Completed.
Increase stack height of Natural Gas Boilers #10 & #11 approx 40 feet to 110 feet each EP142.0 & EP 153.0	December 31, 2013	Completed.
Increase stack height of Corn Cleaner Baghouse (EP 147.0) up to 70 ft	June, 2014	This project requires structural design and fabrication, stack design and fabrication, and installation. This project was subject to Corp Of Engineers approval, since the stack will be constructed on the Mississippi River levee. The approval was received in December 2013.
Add Sources EP600.0, EP601.0, EP603.0, & EP605.0 Remove Sources 28.1, 28.2, 28.3, & EP32.1 - EP32.6 Remove EP40.0, EP41.0, EP42.0 & 85.0 Remove EP108.1, 108.2, 108.3, & 125.0 Remove sources EP 111.0, 112.0, 114.0, & 115.0	March 31, 2015	These sources are associated with DH5 coming on line and the existing dryer house sources that go out of service. DH5 is an extremely complex project, that must be designed, have materials procured, bid packages assembled, contracts awarded and construction completed for a dryer building, evaporator building, dewatering building, and milling building - all buildings contiguous. Also tie-ins to connect the DH5 process to the existing plant processes are complex and requiie coordinated, planned process shutdowns. Design, construction logistics, and complexity, dictate the March 31, 2015 completion of this large project. Construction is on schedule for this substantial, multi-year project.
Decommission DH3 dryer Remove EP79.0, EP80.0. EP81.0, EP82.0	April 30, 2015	Requires modification of existing #10 conveyor, installation of a new 16"screw conveyor, and modifications of spouting from #1 conveyor through new conveyor to the existing drag conveyor from DH3 to DH4. Project will be completed by April 30, 2015 or no later than 6 months after the start up of any new emissions unit associated with Dryer House 5, whichever is sooner. Hulls drying by this dryer is required to maintain plant operation until DH5 comes on line.
Decommission GP1 #3 Dryer (EP 46.0)	April 30, 2015	This project is tied to completion of the DH5 project and DH5's successful startup. DH5 startup is scheduled for March, 2015.
Limitations on coal boilers to control particulate emissions	January 1, 2016	GPC evaluated options to control coal-firing or switch to alternate fuels to meet the requirements of the Boiler MACT (40 CFR 63, Subpart DDDDD). Controlling coal fired emissions will take a minimum of three years to engineer and construct; switching of fuels will require consuming currently contracted coal and assuring that alternate fuel quantities are available and can be delivered to the power house. GPC is in the process of engineering for adequate fuel supplies and associated construction to meet Boiler MACT requirements by the middle of 2015 to early 2016. Currently, there is a capital project commencing in the spring of 2014 to enable GPC to meet Boiler MACT requirements. This project may take up to 18 months to complete and is necessary to provide adequate equipment and supplies to operate the boilers.
DH4 milling systems through new baghouse Remove EP110.0, EP113.0, EP 138.0, EP139.0, EP140.0,& EP 141.0	March 31, 2016	This project requires a new multi-story process building; new pneumatic transport systems for product leaving dryers 5,6, and 7; a product pneumatic receiving baghouse; high static LO. fan; airlock; spouting; and a 54" Stedman cage mill. This sizeable project scope's execution overlaps with the DH5 project execution, as well as several other environmental compliance projects. This project also requires coordinated process shutdowns for the completion of tie-ins. Completion of this project overlaps with DH5 startup and because some of the existing DH4 real estate is reused for the DH5 Product Transfer System and requires a good portion of this project to be operational for DH5 to be operational, work has already commenced on this system and will likely be completed ahead of the March 31, 2016 schedule.
Improve GP1 Units 1&2 Dryers' and Scrubber's performance and increase stack height to 140 feet Modify EP 43.1	August 1, 2016	Permit approval for the #8 Gluten Rotary Vacuum Filter at GP2 will allow GPC to reduce average dewatering and drying load from GP1 and shift to GP2 Dryer. This will allow GPC to consistently run GP1 dryers at lower rates which will improve fine particulate emissions from these dryers and existing scrubber. The existing scrubber stack extension will require the design, fabrication and construction of a structural truss, tied back to the existing building steel, for structural support. Process shutdowns will have to be coordinated and completed to allow for tie-ins to complete this work. The large number of parallel engineering projects is a big factor in the completion timeframe of this subproject.

Attachment D. MPW Control Measures and Timeline

Modify #3 Maltrin Scrubber and add extensions to all Maltrin Stacks EP132.1, EP132.2, EP066.0, EP 135.0, EP136.0, EP168.0, EP169.0, 186.0, EP187.0	September 1, 2016	This is a fairly extensive and complex scope of work. Packed bed sections must be designed and added to both venturi scrubbers on SD #3, structural cages/trusses, as well as stack extensions, will have to be designed, fabricated, and installed for nine separate emission stacks on the Maltrin building roof. Process shutdowns must be planned and executed to complete numerous tie-ins. Again, this project work is happening in parallel to project work for DH5, and other plant environmental improvements. Primary focus will be to address #3 Maltrin SD scrubbers first, then consecutive stack extensions will be address - all while minimizing process interruption and product availability for our customers. From a resource availability standpoint, GPC estimates approximately 18 months after DH5 startup for this subproject.
Install scrubbers on DH4 Rotary Dryers 5, 6, 7 & Relocate Stacks EP 127.0, EP137.0, & EP 164.0	November 1, 2016	There are similar considerations for this project, as the project above. Installation of three separate scrubber systems, including scrubbers, fans, circulation pumps, heat exchangers, and filters are required. Structural modifications are required at MR2 building to accommodate the scrubber equipment and stacks. Several process shutdowns must be coordinated and executed to tie-in new equipment to existing systems. With the possible addition of other control equipment downstream from these scrubbers, additional design and layout will be necessary, resulting in additional engineering and construction time. This is a fairly complex subproject, and when coupled with a large number of parallel environmental projects, GPC expects this project to be completed 20 months after DH5 is operating.
Decommission all P & S dryers; Flash Dryers 1 & 2 on natural gas Remove EP24.1, EP24.2, EP24.3, EP24.4 EP25.1, EP25.2, EP25.3, EP25.4 EP26.1, EP26.2, EP26.3, EP26.4 EP91.1, EP91.2, EP91.3 EP92.1, EP92.2, EP92.3 EP121.1, EP121.2, EP121.3	December 31, 2016	The improvements to Flash Dryer 1 & 2 are required before decommissioning of the P&S Dryers can be requested due to customer requirements. There is a minimum 12 month design, procurement and construction schedule for these dryers. Therefore these PM2.5 emission reductions will not occur until at least 18 months after final permits are received from DNR. Because of possible PSD implications, which may be necessary to permit this conversion, GPC anticipates permits will not to be issued before January 1, 2016. Both flash dryers require a complete redesign of large inlet ductwork systems, including the design of burner sections and BMS (burner management systems), outside contractor review of burner design and fuel train safety provisions, removal of existing steam coils, steam and condensate handling piping and equipment. New ductwork modifications will be designed, built and installed to accommodate the new burner sections, and allow space for future heat recovery coils. Civil/Structural design, burner/duct design, bid package generation, mechanical and electrical contracts, materials procurement, and construction of all the pieces, and coordination of process shutdowns for tie-ins, dictate that this project will require a duration of 12 months after permit approval.
Increase stack height of Flash Dryer #1 (EP 143.0) 40 feet to 177 feet Increase stack height of Flash Dryer #2 (EP 158.0) 40 feet to 179 feet	December 31, 2016	This project would coincide with the Flash Dryer 1 & 2 conversion to natural gas which has a anticipated completion date of December 31, 2016.

LINE	SOURCE NAME	DRAFT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EP ID	ADD CONTROL	MODIFY SOURCE PARAMETERS	ESTABLISH OPERATIONAL RESTRICTION	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	ESTIMATED ACTUAL PM2.5 EMISSIONS REDUCTION (TPY)	
1	COAL HANDLING (RAIL UNLOADING)	93-A-288-S3	BAGHOUSE AND DUST SUPPRESSION SYSTEM	21				0.00121	NA	0.0000	
2	COAL HANDLING (RAIL UNLOADING)	93-A-289-S3	BAGHOUSE AND DUST SUPPRESSION SYSTEM	22				0.00060	NA	0.0000	
3	COAL HANDLING	93-A-290-S3	DUST SUPPRESANT SYSTEM	23A				0.0725	NA	0.0000	
4	COAL PILE (RADIAL STACKER DISCHARGE)	13-A-139	NONE	24				0.0403	NA	0.0000	
	COAL PILE (CONVEYOR TRUCK UNLOADING)		NONE				restrict operation to between 8am and 4pm	0.0014	August 21, 2013	0.0000	
	COAL PILE (BULLDOZING)		NONE				restrict operation to between 6am and midnight	0.8877	August 21, 2013	0.0000	
	COAL PILE (WIND EROSION)		NONE				reduce size of coal pile from 23 acres to 20 acres	Work Practice	August 21, 2013	-0.1423	estimate based on reduction of pile size
5	BARGE COAL UNLOADING	13-A-140	NONE	300			restrict operation to between 6am and midnight and only between the months of March through November	0.0431	August 21, 2013	0.0000	
6	COAL HANDLING (COAL RECLAIM)	80-A-193-S3	BAGHOUSE	301		change stack to vertical release instead of horizontal and increase height from 7 feet to 10 feet		0.0167	September 20, 2013	0.0000	
7	BARGE COAL UNLOADING (BUF DISCHARGE/UC-1 LOAD)	13-A-141	NONE	302			restrict operation to between 6am and midnight and only between the months of March through November	0.0431	August 21, 2013	0.0000	
8	RECLAIM FEEDER/CONVEYORS (RF-2 DISCHARGE/RC-2 LOAD)	00-A-683-S1	NONE	310B			restrict operation to between 6am and 10pm	0.022	August 21, 2013	0.0000	
9	LIVE COAL STORAGE SILO	80-A-194-S3	BAGHOUSE	311			restrict operation to between 6am and 10pm	0.103	August 21, 2013	0.0000	
10	CONVEYORS (RC-2 DISCHARGE/LSCS-2 LOAD)	00-A-684-S1	NONE	311B			restrict operation to between 6am and 10pm	0.0218	August 21, 2013	0.0000	
11	SILO FEEDER (SF1-4/LSC-1)	93-A-286-S5	BAGHOUSE	312				0.0003	NA	0.0000	
12	CONVEYORS (LSCS-2 DISCHARGE/SF-6 LOAD)	00-A-686-S1	NONE	312B				0.0058	NA	0.0000	
13	CONVEYORS (SF-6 DISCHARGE / RC-3 LOAD)	00-A-687-S1	NONE	313B				0.0058	NA	0.0000	
14	SILO FEEDER AND EPC-1 CONVEYOR LOAD	80-A-196-S4	BAGHOUSE	314				0.0155	NA	0.0000	
15	UNIT 7 & 8 COAL CRUSHER FEEDERS	01-A-193-S2	BAGHOUSE	320		increase stack height from 14 feet to 24 feet		0.0823	September 20, 2013	0.0000	
16	UNIT 7 & 8 COAL CRUSHERS	80-A-006-S3	BAGHOUSE	322				0.028	NA	0.0000	
17	TRUCK UNLOADING - TRACK HOPPER A CONV.	13-A-153	NONE	330			restrict operation to between 8am and 4pm	0.0058	August 21, 2013	0.0000	
18	TRUCK LOADING - TRACK HOPPER A CONV.	13-A-154	NONE	330A			restrict operation to between 8am and 4pm	0.0058	August 21, 2013	0.0000	
19	CONVEYOR SYSTEM LOAD	80-A-007-S3	BAGHOUSE	333				0.061	NA	0.0000	
20	CONVEYOR SYSTEM DISCHARGE	00-A-638-S1	BAGHOUSE	341				0.061	NA	0.0000	
21	UNIT 9 CRUSHER HOUSE (DC-11 EXHAUST)	06-A-650-S3	BAGHOUSE	351				0.0341	NA	0.0000	
22	PSC-9 CONVEYOR / 4 COAL SILOS	80-A-197-S2	BAGHOUSE	360				0.034	NA	0.0000	
23	SOC-1 CONVEYOR DISCHARGE/RSC-1 CONVEYOR	93-A-283-S2	BAGHOUSE	370				0.00029	NA	0.0000	
24	LIMESTONE HOPPER LOADING	13-A-155	NONE	40	add three-sided enclosure with roof		reduce capacity of system from 400 TPH to 200 TPH and restrict operation to between 8am and 4pm	0.1475	August 21, 2013	-0.0007	average of 2007/2008 EIQ assuming 41% reduction in emissions for reduced wind speed from enclosure
25	LIMESTONE HANDLING SYSTEM	80-A-202-S2	BAGHOUSE	41				0.088	NA	0.0000	
26	LIMESTONE PILE (TRUCK UNLOADING)	13-A-142	NONE	45			reduce capacity of system from 400 TPH to 50 TPH and limit source to receiving no more than 6 loads of limestone per day and 90 tons per day. Restrict limestone delivery to between 6am and 4 pm	0.0625	August 21, 2013	0.0000	they currently do not receive more than 6 loads of limestone per day
	LIMESTONE PILE (WIND EROSION)		NONE				reduce size of limestone pile from 2 acres to 1 acre	Work Practice	August 21, 2013	-0.0456	estimate based on reduction of pile size
27	AUXILIARY BOILER (29.26 MMBTU/HR)	13-A-152	NONE	60				0.567	NA	0.0000	
28	UNIT 7 BOILER (289 MMBTU/HR)	74-A-175-S3	MULTICLONE/ESP	70				8.57	NA	0.0000	
29	UNIT 8 BOILER (870 MMBTU/HR)	95-A-373-P2	OFA/ESP	80				37.57	NA	0.0000	
30	FLY ASH SILO/ DRY FLY ASH TRUCK LOADING	00-A-639-S1	CARTRIDGE FILTER	810				0.056	NA	0.0000	
31	WET FLY ASH TRUCK LOADING	NA	NONE	811			permanently remove emission unit(s)	0.0000	NA	-0.0009	
32	FLY ASH SILO	01-A-218-S1	BIN VENT FILTER	814			only one operation at a time: either truck loadout or silo filling	0.0013	August 21, 2013	0.0000	
33	ASH/SLAG STORAGE PILES (TRUCK LOADING)	13-A-143	NONE	860			restrict operation to between 7am and 7pm	0.0031	August 21, 2013	0.0000	
	ASH/SLAG STORAGE PILES (TRUCK UNLOADING)		NONE				restrict operation to between 7am and 7pm	0.0031	August 21, 2013	0.0000	
	ASH/SLAG PILE (BULLDOZING)		NONE				Restrict operation to between 7am and 7pm. Allow the operation of only one bulldozer instead of three	0.0742	August 21, 2013	-0.0228	estimate of removing additional bulldozers
	ASH/SLAG PILE (WIND EROSION)		NONE					Work Practice	NA	0.0000	
34	UNIT 9 BOILER (1556 MMBTU/HR)	80-A-191-P2	2 ESP/2 SCRUBBERS	90				43.59	NA	0.0000	
35	REVERSING CONVEYOR A (LOAD/DISCHARGE)	13-A-157	NONE	912A				0.00121	NA	0.0000	
36	REVERSING CONVEYOR B (LOAD/DISCHARGE)	13-A-158	NONE	912B				0.00121	NA	0.0000	
39	RADIAL STACKER LOAD/DISCHARGE	13-A-159	NONE	916B			reduce capacity of system from 40 TPH to 20 TPH and restrict operation to between 7am and 7pm	0.0012	August 21, 2013	0.0000	
40	SYNTHETIC GYPSUM STORAGE PILE (TRUCK LOAD)	13-A-146	NONE	919			restrict operation to between 7am and 7pm	0.00121	August 21, 2013	0.0000	
	SYNTHETIC GYPSUM STORAGE PILE (TRUCK LOAD TRAFFIC)		NONE				restrict operation to no more than 9 gypsum trucks per day and operation to between 7am and 7pm	Work Practice	August 21, 2013	0.0000	currently load out 2-3 trucks per day
	SYNTHETIC GYPSUM STORAGE PILE (RADIAL STACKER)		NONE				restrict operation to between 7am and 7pm	0.00121	August 21, 2013	0.0000	
	SYNTHETIC GYPSUM STORAGE PILE (PILE FORM)		NONE				restrict operation to between 7am and 7pm	0.0125	August 21, 2013	0.0000	
	SYNTHETIC GYPSUM STORAGE PILE (WIND EROSION)		NONE				reduce size of pile from 2 acres to 0.5 acres	Work Practice	August 21, 2013	-0.2273	based on reducing emissions from 0.0682 lb/hr to 0.0163 lb/hr
41	FLY ASH SILO	80-A-201-S1	BIN VENT FILTER	920				0.0058	NA	0.0000	
42	FLY ASH STORAGE	80-A-200-S1	CARTRIDGE FILTER	920A	change stack to vertical unobstructed release and increase stack height from 12 feet to 13.83 feet		Allow only one of either EP920A or EP920B to operate at any one time	0.122	September 20, 2013	0.0000	currently how emission units operate
43	FLY ASH STORAGE	13-A-147	CARTRIDGE FILTER	920B	change stack to vertical unobstructed release and increase stack height from 12 feet to 13.83 feet		Allow only one of either EP920A or EP920B to operate at any one time	0.122	September 20,2013	0.0000	currently how emission units operate
44	DRY FLY ASH TRUCK LOADING/ UNLOADING	13-A-148	ENCLOSED SPOUT	924			restrict operation to between 7am and 4pm	0.032	August 21, 2013	0.0000	
45	DRY FLY ASH TRUCK UNLOADING	01-A-456-S1	NONE	925			restrict operation to between 7am and 4pm	0.040	August 21, 2013	0.0000	
46	ASH SILOS/DRY ASH TRUCK LOADOUT	01-A-457-S5	BAGHOUSE	926			restrict operation to between 7am and 4pm	0.018	August 21, 2013	0.0000	
47	FLY ASH HOPPER LOADING	04-A-617-S1	WIND SCREEN	926A2			restrict operation to between 7am and 4pm	0.0084	August 21, 2013	0.0000	
48	FLY ASH PILE FORMATION	04-A-618-S1	NONE	926A3			restrict operation to between 7am and 4pm	0.00095	August 21, 2013	0.0000	
49	HAUL ROAD FLY ASH PILE TO HOPPER	04-A-619-S1	DUST SUPPRESANT	926A4			restrict operation to between 7am and 4pm	Work Practice	August 21, 2013	0.0000	
50	FLY ASH VACUUM PUMP (5 GPH)	NA	NONE	928A			permanently remove emission unit(s)	0.0000	October 12, 2013	-0.0098	average of 2007/2008 EIQ
51	FLY ASH BLOWER DIESEL EXHAUST (2 GPH)	NA	NONE	928B			permanently remove emission unit(s)	0.0000	October 12, 2013	-0.0066	average of 2007/2008 EIQ
52	PORTABLE DIESEL GENERATOR (14.3 GPH)	NA	NONE	928C			permanently remove emission unit(s)	0.0000	October 12, 2013	-0.0060	average of 2007/2008 EIQ
53	HYDRATED LIME SILO	NA	BAGHOUSE	990			permanently remove emission unit(s)	0.0000	Already Complete	0.0000	emission unit(s) not used since at least 2007
54	HYDRATED LIME MIXING TANK	NA	NONE	991			permanently remove emission unit(s)	0.0000	Already Complete	0.0000	emission unit(s) not used since at least 2007
55	12 PORTABLE GASOLINE ENGINES (4.83 GPH TOTAL)	13-A-150	NONE	7890			restrict operation to between 6am and 10pm	0.0604	August 21, 2013	0.0000	
56	PORTABLE DIESEL ENGINE (4.0 GPH TOTAL)	13-A-151	NONE	7892			restrict operation to between 6am and 10pm	0.187	August 21, 2013	0.0000	
57	PORTABLE DIESEL ENGINE - WELL PUMP (24.6 GPH)	11-A-562-S1	NONE	V168				0.187	NA	0.0000	
58	HAUL ROADS (POINT A - B)	13-A-160-S1	NONE	9999	apply water to road surface to reduce silt content 50% from 13.5 g/m2 to 6.75 g/m2		gypsum operation: restrict operation between 7am and 7pm. Limestone operation: restrict operation between 6am and 4pm. Ash/Slag Operation: restrict operation between 7am and 7pm	Work Practice	August 21, 2013	-0.0668	based on reducing silt on road surface from 13.5 g/m2 to 6.75 g/m2; increase by 0.0049 tpy due to Chem Mod
59	HAUL ROADS (POINT B - C)	13-A-160-S1	NONE	9999	apply water to road surface to reduce silt content 50% from 13.5 g/m2 to 6.75 g/m2		gypsum operation: restrict operation between 7am and 7pm. Limestone operation: restrict operation between 6am and 4pm. Ash/Slag Operation: restrict operation between 7am and 7pm	Work Practice	August 21, 2013	-0.0554	based on reducing silt on road surface from 13.5 g/m2 to 6.75 g/m2; increase by 0.0077 tpy due to Chem Mod

Attachment D - Muscatine Power Water Control Measures and Timeline

LINE	SOURCE NAME	DRAFT PERMIT NUMBER	CURRENT CONTROL EQUIPMENT	EP ID	ADD CONTROL	MODIFY SOURCE PARAMETERS	ESTABLISH OPERATIONAL RESTRICTION	REQUIRED $PM_{2.5}$ EMISSION LIMIT (pounds/hour)	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	ESTIMATED ACTUAL PM2.5 EMISSIONS REDUCTION (TPY)	
60	HAUL ROADS (POINT C - B) UNPAVED	13-A-160-S1	NONE	9999	pave road surface and apply water to road surface keep silt content at 6.75 g/m2		restrict operation between 7am and 7pm	Work Practice	August 21, 2013	-0.0147	based on reducing silt on road surface from 13.5 g/m2 to 6.75 g/m2
61	HAUL ROADS (POINT C - D)	13-A-160-S1	NONE	9999	apply water to road surface to reduce silt content 50% from 13.5 g/m2 to 6.75 g/m2		gypsum operation: restrict operation between 7am and 7pm. Limestone operation: restrict operation between 6am and 4pm. Ash/Slag Operation: restrict operation between 7am and 7pm	Work Practice	August 21, 2013	-0.0918	based on reducing silt on road surface from 13.5 g/m2 to 6.75 g/m2; increase by 0.0067 tpy due to Chem Mod
62	HAUL ROADS (POINT D - I)	13-A-160-S1	NONE	9999			gypsum operation: restrict operation between 7am and 7pm. Limestone operation: restrict operation between 6am and 4pm	Work Practice	NA	0.0000	
63	HAUL ROADS (POINT I - F)	13-A-160-S1	NONE	9999			restrict operation between 7am and 7pm	Work Practice	NA	0.0000	
64	HAUL ROADS (POINT I - E)	13-A-160-S1	NONE	9999			restrict operation between 6am and 4pm	Work Practice	NA	0.0000	
65	HAUL ROADS (POINT E - H) UNPAVED	13-A-160-S1	NONE	9999			restrict operation between 6am and 4pm	Work Practice	NA	0.0000	
66	HAUL ROADS (POINT A - G)	13-A-160-S1	NONE	9999			restrict operation between 7am and 7pm	Work Practice	NA	0.0000	
67	HAUL ROADS (POINT G - J) UNPAVED	13-A-160-S1	NONE	9999			restrict operation between 7am and 7pm	Work Practice	NA	0.0000	
68	HAUL ROADS (POINT J - J) UNPAVED - see above	13-A-160-S1	NONE	9999			restrict operation between 7am and 7pm	Work Practice	NA	0.0000	
69	LEVEE	13-A-161	NONE	LEVEE			restrict access to levee per plan included in construction permit	NA	August 21, 2013	0.0000	
	* If emission unit is operational before emission limit effective date, the date the unit becomes operational is the effective date of the PM2.5 emission limit									-0.6906	TONS
										1.19	% REDUCTION
										58.2673	TONS

Attachment E. MPW Air Construction Permits

(See separate attachment document)

Attachment F. UTLX Control Measures and Timeline

Attachment G. UTLX Air Construction Permits

(See separate attachment document)

Attachment F – Union Tank Car Control Measures and Timeline

LINE	SOURCE NAME	CURRENT PERMIT NUMBER	CONTROL EQUIPMENT	EPID	ADD CONTROL	MOD EMIS SOURCE PARAMETERS	ESTABLISH OPERATIONAL RESTRICTION	REQUIRED PM2.5 EMISSION LIMIT (pounds/hour)	CONSTRUCTION/OPERATIONAL MODIFICATION COMPLETION DATE (no later than date listed below)	PROJECTION LIMIT TEST DEADLINE DATE (no later than date listed below*)	ESTIMATED PM2.5 EMISSIONS REDUCTION (TPY)					
1	Rail car Interior Grit Blast Booth	90-A-2-S1-S1	Bag House	EP-1				0.0195	July 31, 2013	April 8, 2013	0.0000					
2	Rail car Interior Grit Blast Booth	90-A-2-S2-S1	Bag House and Panel Filter	EP-2	Add additional filter to reduce particulate emissions	emission point shall only exert visible pollution during		0.0195	September 30, 2013	September 30, 2013	0.0004					
3	Rail car Interior Grit Blast Booth	90-A-2-S3-S1	Bag House and Panel Filter	EP-3	Add additional filter to reduce particulate emissions	emission point shall only exert visible pollution during		0.0195	September 30, 2013	September 30, 2013	0.0004					
4	Rail car Super Finishing Filter	90-A-2-S4-S1	Filter	EP-4				0.0073	NA	April 8, 2013	0.0000					
5	Rail car Exterior Painting	90-A-2-S5-S1	Dry Filters	EP-5A				0.08	NA	April 8, 2013	0.0000					
6	Rail car Exterior Painting	90-A-2-S6-S1	Dry Filters	EP-5B				0.08	NA	April 8, 2013	0.0000					
7	Rail car Exterior Painting	90-A-2-S7-S1	Dry Filters	EP-5C				0.08	NA	April 8, 2013	0.0000					
8	Rail car Exterior Painting	90-A-2-S8-S1	Dry Filters	EP-5D				0.08	NA	April 8, 2013	0.0000					
9	Rail car Interior Painting/Shrend & Touchup	90-A-2-S9-S1	Pleated Filter	EP-6A	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
10	Rail car Interior Painting/Shrend & Touchup	90-A-2-S10-S1	Pleated Filter	EP-6B	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
11	Rail car Interior Painting/Shrend & Touchup	90-A-2-S11-S1	Pleated Filter	EP-6C	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
12	Rail car Interior Painting/Shrend & Touchup	90-A-2-S12-S1	Pleated Filter	EP-6D	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
13	Rail car Interior Painting/Shrend & Touchup	90-A-2-S13-S1	Pleated Filter	EP-6E	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
14	Rail car Interior Painting/Shrend & Touchup	90-A-2-S14-S1	Pleated Filter	EP-6F	Add filter to reduce particulate emissions			0.021	September 30, 2013	September 30, 2013	0.0063					
15	Rail car Interior Painting/Shrend & Touchup	90-A-2-S15-S1	None	EP-6G				0.04	NA	April 8, 2013	0.0000					
16	Rail car Interior Painting/Shrend & Touchup	90-A-2-S16-S1	None	EP-6H				0.04	NA	April 8, 2013	0.0000					
17	Rail car Interior Painting/Shrend & Touchup	90-A-2-S17-S1	None	EP-6I				0.04	NA	April 8, 2013	0.0000					
18	Rail car Interior Painting/Shrend & Touchup	90-A-2-S18-S1	None	EP-6J				0.04	NA	April 8, 2013	0.0000					
19	Rail car Interior Painting/Shrend & Touchup	90-A-2-S19-S1	None	EP-6K				0.04	NA	April 8, 2013	0.0000					
20	Rubber Lining of Tank Cars	90-A-1-S8-S2	Cyclo Filter	EP-7A	Add filter to reduce particulate emissions			0.02	November 31, 2013	November 31, 2013* *	0.0008					
21	Rubber Lining of Tank Cars	90-A-1-S9-S2	Cyclo Filter	EP-7B	Add filter to reduce particulate emissions			0.02	November 31, 2013	November 31, 2013* *	0.0008					
22	Rubber Lining of Tank Cars	90-A-1-S10-S2	Cyclo Filter	EP-7C	Add filter to reduce particulate emissions			0.02	November 31, 2013	November 31, 2013* *	0.0008					
23	Rubber Lining Building Ventilation	90-A-4-S-S2	Cyclo Filter	EP-7D	Add filter to reduce particulate emissions	Change stack orientation from vertical to horizontal. Landscaped	permanently cease operation of emission unit 92 emission point	0.02	November 31, 2013	November 31, 2013* *	0.0008					
24	Rubber Lining Building Ventilation	90-A-4-S-S1	None	EP-7E				0.0015	Already Complete	Already Complete	0.0000	this emission point has been virtually contained for no reduction in emission from its removal.				
25	Inline Tank Car Qualification Process	90-A-1-S6-S2	Pleated Filter	9A	Add filter to reduce particulate emissions			0.017	September 30, 2013	September 30, 2013	0.0013					
26	Inline Tank Car Qualification Process	90-A-1-S7-S2	Pleated Filter	9B	Add filter to reduce particulate emissions			0.017	September 30, 2013	September 30, 2013	0.0013					
27	Water Blast Operation	90-A-4-S4-S2	None	EP-27				0.017	NA	April 8, 2013	0.0000					
28	Inline Tank Car Qualification Process	90-A-1-S8-S2	Pleated Filter	EP-9A1	Add filter to reduce particulate emissions	Replace fan to increase airflow from 5,000 cubic to 20,000 cubic		0.013	September 30, 2013	September 30, 2013	0.0006					
29	Inline Tank Car Qualification Process	90-A-1-S9-S2	Pleated Filter	EP-9A2	Add filter to reduce particulate emissions	Replace fan to increase airflow from 5,000 cubic to 20,000 cubic		0.013	September 30, 2013	September 30, 2013	0.0006					
30	Inline Tank Car Qualification Process	90-A-1-S10-S2	Pleated Filter	EP-9A3	Add filter to reduce particulate emissions	Replace fan to increase airflow from 5,000 cubic to 20,000 cubic		0.013	September 30, 2013	September 30, 2013	0.0006					
	* Footnote cover Rail car pressure test & other emissions control & Rail car tank, Hot oil & Wax & solvent cleaning operations & Rail car Wash & Wax Pilot. 3 minutes a item									TOTAL REDUCTIONS	0.1016	YES				
	** Compliance with a minimum 5 hour stack sampling number 4 of the last series of stack samples will not be required if the last 3 of 4 stack test results, 100% total control are equal or better									APPROXIMATE DEFERRED FACILITY WIDE TOTAL ACTUAL EMISSIONS	1.3102	YES				

Attachment H. Proof of Publication

PROOF OF PUBLICATION

I, Jeff Lee, being duly sworn, on my oath, say that I am an advertising clerk at the *Muscatine Journal*, a newspaper of general circulation, published in the City of Muscatine, Muscatine County, Iowa; and that the following Notice:

Iowa Air Quality Bureau
Public Notice
SIP For Fine Particulate Matter In Muscatine

Of which the annexed printed slip is a true, correct and complete copy, was published in said *Muscatine Journal* one time having been made there in on:

May 21, 2013

Jeff Lee

STATE OF IOWA
MUSCATINE COUNTY

Subscribed and sworn to before me this
21st day of May 2013

Beth Lester, Notary Public

Beth Lester
Iowa Notarial Seal
Commission number 745921
My Commission Expires 03/20/2016

Public Notice
Iowa Department of Natural Resources
THE Iowa Department of Natural Resources (DNR) is requesting public comment on the State of Iowa's state implementation plan (SIP) for fine particulate matter (PM2.5) in Muscatine, Iowa.
In 2011, the U.S. Environmental Protection Agency (EPA) Region 7 found that the Iowa's SIP was substantially inadequate to maintain the 2006 24-hour National Air Quality Standard (NAAQS) for PM2.5 in Muscatine. This finding was published in the Federal Register (76 FR 41424) on July 14, 2011, and was effective on August 15, 2011. EPA's finding required the State to revise the SIP and include measures to attain and maintain the 2006 24-hour PM2.5 NAAQS in Muscatine. The DNR collaborated with facilities in Muscatine to develop air pollution control measures that will result in expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions.
An electronic copy of the SIP document may be viewed at www.iowacleanair.com. Click on Inside DNR, then select Regulatory-Air. Next select Stakeholder Involvement, followed by Public Input. The documents will be located under the Area or Company Specific Plans portion of the Webpage. A hardcopy version of the documents may also be viewed at the Muscatine Public Library, located at 304 Iowa Avenue, Muscatine, Iowa.
Any person may make written comments on the proposed SIP revisions on or before June 25, 2013. Written comments should be directed to Jim McGraw, Department of Natural Resources, Air Quality Bureau, 7900 Hickman Road, Suite 1, Windsor Heights, Iowa, 50324, fax 515-242-5094, or by electronic mail to Jim.Mcgraw@dnr.iowa.gov.
A public hearing will be held on June 24, 2013 at 2:00 p.m. at the Muscatine City Hall Council Chambers, 215 Sycamore St., in Muscatine. All comments must be received no later than 4:30 p.m. on June 25, 2013.
Any person who intends to attend the public hearing and has special requirements such as those related to hearing or mobility impairments should contact Jim McGraw at 515-242-5167 to advise of any specific needs.
A responsiveness summary will be prepared by the DNR following the close of the public comment period. The responsiveness summary will include any written or oral comments received during the public participation process and the DNR's response to the comments. The completed responsiveness summary will be forwarded to EPA and made available to the public upon request.

RECEIVED
MAY 24 2013
IDNR AIR QUALITY

PROOF OF PUBLICATION

I, Jeff Lee, being duly sworn, on my oath, say that I am an advertising clerk at the *Muscatine Journal*, a newspaper of general circulation, published in the City of Muscatine, Muscatine County, Iowa; and that the following Notice:

Iowa Air Quality Bureau
Public Notice
Iowa Dept. Of Natural Resources

Of which the annexed printed slip is a true, correct and complete copy, was published in said *Muscatine Journal* one time having been made there in on:

November 16, 2013

Jeff Lee

Jeff Lee

STATE OF IOWA
MUSCATINE COUNTY

18th day of November 2013

Stefanie D. Trinh

Stefanie D. Trinh, Notary Public

NOTARIAL SEAL IOWA

Stefanie D. Trinh
Iowa Notarial Seal
Commission number 778997
My Commission Expires 06/20/2016

RECEIVED
NOV 22 2013
IDNR AIR QUALITY

Public Notice
Iowa Department of Natural Resources

THE Iowa Department of Natural Resources (DNR) is requesting public comment on a second draft of the State of Iowa's state implementation plan (SIP) for fine particulate matter (PM2.5) in Muscatine, Iowa.

The first draft of the PM2.5 SIP for Muscatine was made available for public comment during May 2013. The second draft of the PM2.5 SIP document incorporates changes made as a result of public comments received on the first draft of the SIP.

In 2011, the U.S. Environmental Protection Agency (EPA) Region 7 found that the Iowa's SIP was substantially inadequate to maintain the 2006 24-hour National Air Quality Standard (NAAQS) for PM2.5 in Muscatine. This finding was published in the Federal Register (76 FR 41424) on July 14, 2011, and was effective on August 15, 2011. EPA's finding required the State to revise the SIP and include measures to attain and maintain the 2006 24-hour PM2.5 NAAQS in Muscatine. The DNR collaborated with facilities in Muscatine to develop air pollution control measures that will result in expeditious attainment of the 24-hour PM2.5 NAAQS through reductions of ambient air impacts of PM2.5 emissions.

An electronic copy of the revised SIP document, and a copy of DNR's responses to the comments received on the first draft of the SIP document, may be viewed at www.iowacleanair.com. Click on Stakeholder Involvement. The documents will be located under the Public Input portion of the Webpage. A hard-copy version of the documents may also be viewed at the Muscatine Public Library, located at 304 Iowa Avenue, Muscatine, Iowa.

Any person may make written comments on the proposed SIP revisions on or before December 20, 2013. Written comments should be directed to Jim McGraw, Department of Natural Resources, Air Quality Bureau, 7900 Hickman Road, Suite 1, Windsor Heights, Iowa, 50324, fax 515-725-9501, or by electronic mail to Jim.Mcgraw@dnr.iowa.gov.

A public hearing will be held on December 18, 2013 at 1:00 p.m. at the Muscatine County Conservation Board's Environmental Learning Center, 3300 Cedar Street, in Muscatine. All comments must be received no later than 4:30 p.m. on December 20, 2013.

Any person who intends to attend the public hearing and has special requirements such as those related to hearing or mobility impairments should contact Jim McGraw at 515-725-9543 to advise of any specific needs.

A responsiveness summary will be prepared by the DNR following the close of the public comment period. The responsiveness summary will include any written or oral comments received during the public participation process and the DNR's response to the comments. The completed responsiveness summary will be forwarded to EPA and made available to the public upon request.

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **9** **DECISION**

TOPIC **Contract with the University of Iowa for Shallow Lake Monitoring Support**

Recommendations:
Commission approval is requested for a 1 year-service contract with The University of Iowa on behalf of the State Hygienic Laboratory of Iowa City, Iowa. The contract will begin on April 15, 2014 and terminate on April 15, 2015. The total amount of this contract shall not exceed 38,491.20.

Funding Source:
This contract will be funded through Environment First Appropriations and the Lake Restoration Fund.

Background:
Shallow lakes monitoring started in 2005-2006 and has provided the DNR and other project partner's beneficial pre- and post- renovation information. This information is shared with the public and used by the DNR to support management and planning decisions and guide future successful restorations.

Purpose:
The parties propose to enter into this Contract for the purpose of retaining the Contractor to provide: laboratory analytical services to DNR in order to help assess the effectiveness of shallow lakes restoration projects.

Contractor Selection Process:
University of Iowa – State Hygienic Laboratory was chosen using the intergovernmental agreement process. The University of Iowa – State Hygienic Laboratory was chosen for this project because of their laboratory analysis expertise.

Roger Bruner, Supervisor
Watershed Monitoring and Assessment Section
Iowa Geological and Water Survey Bureau,
Environmental Services Division
February 18, 2014

Attachment(s): Special Conditions for Contract

Statement of Work. Contractor shall perform the following tasks. Contractor shall complete its obligations under this Contract by the Task Milestone Dates set out in the following table.

Obligation	Task Milestone Date
Task 1: Data Analysis **Description:** SHL shall provide chemical analysis of shallow lake water samples provided by DNR staff. Samples for this activity shall be coded as DNRSHALLAKES-6. SHL shall conduct the analyses in accordance with the specifications contained in Exhibit 1, which is attached hereto and by this reference made a part of this contract. SHL shall provide sample containers and chain of custody paperwork for the water samples to be collected by the DNR staff during the contract period. The list of lakes to be sampled is provided in Table 1. DNR staff will sample from the priority list submitted to SHL. DNR will pick up sample containers at SHL Ankeny facility and will deliver samples to SHL for analysis. These samples shall be analyzed for the analytes shown in Table 2 or as modified on the chain of custody form submitted with the samples.	Samples shall be analyzed no later than holding times established by SHL's Quality Management Plan (attached as Exhibit 1), including standard operating procedures for laboratory analyses, unless authorized in writing by DNR.
Task 2: Data Transfer **Description**: SHL shall transfer water monitoring data to the DNR Watershed Monitoring and Assessment Section electronically in a mutually agreeable format on a monthly basis. The DNR project manager may/shall obtain the project data via the SHL Open ELIS web portal upon notification from the SHL project manager that the data package is complete and ready for retrieval. Chemical and physical data shall include STORET station identification number, which will be provided by DNR for all station locations. SHL shall submit completed fixed monitoring results to DNR.	Notification that the data package is ready for retrieval shall occur no later than fifteen (15) calendar days after the end of each month or as soon as possible following completion of all analytical determinations requested. Extra time for analysis is allowed in cases where the analytical work warrants. A notification to the DNR submitter that analytical results from a sample will be delayed, and the reason for the delay, shall be made to DNR in writing by email within fifteen (15) calendar days or as soon as possible after receipt of the sample if extra time is required for analysis.

Table 1. List of Shallow Lakes for 2014 Sampling*

SHALLOW LAKE NAME	STORET	COUNTY	UTM (X)	UTM (Y)
Big Wall Lake	22990005	WRIGHT	446871	4718555
Cheever Lake	22320007	EMMET	347514	4803733
Dan Greene Slough	22100004	CLAY	336509	4786646
Diamond Lake	29300002	DICKINSON	322837	4816754
West Twin Lake	22410004	HANCOCK	440088	4754202
Barringer Slough	22100003	CLAY	342224	4778761
Four Mile Lake	22320008	EMMET	345448	4806362
Blue Wing Marsh	22740005	PALO ALTO	347738	4781089

Marble Lake	22300017	DICKINSON	327378	4815752
Lizard Lake	22760001	POCHAHONTAS	377446	4725287
Ventura Marsh	22170006	CERRO GORDO	460828	4774386
Twelve Mile Lake	22320009	EMMET	347612	4794531
West Hottes Lake	22300018	DICKINSON	326600	4816083
Silver Lake	22980001	WORTH	466172	4814288
Pleasant Lake	22300020	DICKINSON	335732	4807825
Swan Lake	22300022	DICKINSON	342337	4813834

***DNR may make substitutions to the list with 5 days written advanced notice to SHL.**

Table 2. List of Parameters and Frequency

Parameter	Sampling Frequency	Months Sampled	Cost/Sample	Parameter Cost/Site/Year
Chemical Analysis				
Chloride	Monthly	May – September	$ 13.50	$ 67.50
Ammonia as N	Monthly	May - September		
Total Kjeldahl N	Monthly	May - September	$ 61.50	$ 307.50
Nitrate/Nitrite as N	Monthly	May - September		
Ortho Phosphate as P	Monthly	May - September	$ 27.00	$ 135.00
Total Phosphorus as P	Monthly	May - September		
Total Dissolved Solids	Monthly	May - September	$ 13.50	$ 67.50
Total Suspended Solids	Monthly	May - September	$ 13.50	$ 67.50
Total Volatile Suspended Solids	Monthly	May - September	$ 27.50	$ 137.50
Chlorophyll a	Monthly	May - September	$ 41.00	$ 205.00
Biological Analysis				
Zooplankton	Monthly	May - September	$ 87.00	$ 435.00
Phytoplankton	Monthly	May - September	$ 87.00	$ 435.00
Invertebrate	2x Yearly	April, Mid-July	$ 185.00	$ 370.00

Budget & Submission of Invoices. The budget and submission of invoices for this Contract shall be as follows:

Task	**Amount of compensation allotted to Task** **(Variable Payment)**	**Task Milestone Date**	**Invoice Due** **No Later Than:**
Task 1. Data Analysis	Not to Exceed $ 35,640.00	Samples shall be analyzed no later than holding times established by SHL's Quality Management Plan (including standard operating procedures for laboratory analyses) unless authorized in writing by the Department.	30 days following the end of each month.
Task 2 – Data Transfer	NA	No later than: 15 calendar days after the end of each month or as soon as possible following completion of all analytical determinations requested. Extra time for analysis is allowed in cases where the analytical work warrants. A notification to the submitter, that analytical results from a sample will be delayed and the reason for the delay, shall be made within fifteen (15) calendar days or as soon as possible after, receipt of the sample if extra time is required for analysis.	NA
Sub-totals	Not to Exceed $ 35,640.00		
Facilities and Administrative Costs @ 8%	Not to Exceed $2,851.20		NA; Included with invoice above
Total	Not to exceed: $38,491.20		

Environmental Protection Commission
Iowa Department of Natural Resources

ITEM **11** **DECISION**

TOPIC **Contract Amendment with the State Hygienic Laboratory at the University of Iowa for Rathbun Water Quality Monitoring**

Recommendations:
Commission approval is requested for an amendment to the twenty-one month-service contract with State Hygienic Laboratory at the University of Iowa of Iowa City, IA. The contract began April 1, 2013 and will terminate on December 31, 2014. The total amount of the original contract was not to exceed $ 317,373.12 and this amendment does not increase this amount.

Funding Source:
This contract will be funded through a US EPA grant (Section 106 of the CWA). The Rathbun Land and Water Alliance (RLWA) also has additional funds available if necessary.

Contracting Authority is granted under the Code of Iowa 455B.103.

Background:
RLWA has funded water quality monitoring activities throughout the Rathbun watershed since 1997, developing partnerships that have led to successful watershed improvement efforts. The DNR has long supported the efforts of the RLWA and has utilized the data collected through their programs to characterize water quality in the Rathbun watershed, track the trends in water quality over time, measure the success of best management practices funded through the 319 program, estimate loading of pollutants to Rathbun Lake, and provide the RLWA with the information necessary to manage and evaluate Rathbun Lake most appropriately.

This contract and its amendment encompass expanded water monitoring efforts in the Rathbun Lake watershed to provide the data needed to develop a credible computer model of the lake-watershed system. The computer model will be used to develop Total Maximum Daily Loads (TMDLs) for the lake system. This contract is a partnership with the Rathbun Land and Water Alliance (RLWA), the DNR Watershed Improvement Section, the DNR Watershed Monitoring and Assessment Section, and the US Army Corps of Engineers.

The goal is to develop a robust TMDL to guide future watershed planning and implementation strategies. The data collected under this contract will also inform the RLWA, DNR, and US EPA on any progress made in addressing the water impairments in the lake.

Purpose: Due to the 2013 drought, the entire amount of money was not spent and unspent funds (as of January 28, 2014) of $234,217.79 exist. The purpose of this amendment is to provide for expenditure of the unspent funds for the completion of the remaining original tasks, as revised by this amendment, and to add one new task. The funds will be spent

within the existing contract framework and the work accomplished will render additional information. There is no change to the contractor or the overall goals of the original contract.

Contractor Selection Process:
The State Hygienic Laboratory at the University of Iowa (SHL) was chosen based on the Iowa Code section 455B.103, which allows the DNR to contract with public agencies of the state. SHL has sample collection and analysis expertise.

Roger Bruner, Supervisor
Watershed Monitoring and Assessment Section
Iowa Geological and Water Survey Bureau, Environmental Services Division
Commission Date

Attachment(s): Amendment 1 to Contract 2013ESDGSBMBALM001

Amendment Obligations	Task Milestone Date
Amendment Task 14: Lake Monitoring Analysis **Description:** Contractor shall analyze samples collected by DNR for the parameters listed in Amendment Table 1 (below). Contractor shall analyze samples for up to a total of 16 sampling events for 4 sampling sites, with multiple depths collected at each site. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than."	Samples shall be analyzed no later than holding times established by QA/QC documentation agreed upon by both parties prior to sample analysis. For the purposes for invoices, the effective Task Milestone Date shall be the last day of each month.

Original Contract Obligations	Task Milestone Date
Original Task 2 is revised to add the following language: **Task 2:** Ambient sample analysis for 14 sites **Description of Revision:** Contractor shall also analyze samples for total dissolved solids (laboratory analysis) in addition to parameters outlined in original contract.	Samples shall be analyzed no later than holding times established by QA/QC documentation agreed upon by both parties prior to sample analysis. For purposes of invoices, the effective Task Milestone Date shall be the last day of each month.
Original Task 4 is revised to add the following language: **Task 4:** Event sample analysis for 4 sites **Description of Revision:** Contractor shall also analyze samples for total dissolved solids (laboratory analysis) in addition to parameters outlined in original contract.	Samples shall be composited according to Charles Ikenberry's instructions and analyzed no later than holding times established by QA/QC documentation agreed upon by both parties prior to sample analysis. For purposes of invoices the effective Task Milestone Date shall be the last day of each month.
Original Task 5 is revised to replace the original language in its entirety and to read as follows: **Task 5:** Depth Integrated Ambient Sample Collection at Site RA-12 and RA-15 **Description of Revision:** Contractor shall collect depth integrated samples from the site outlined in the original contract (RA-12) and from site RA-15 twice per month, approximately every 2 weeks, from March 2014 to October 2014, as conditions permit. Samples collected as a part of this	No later than October 31, 2014

activity shall be coded as RATHBUN 2013-2014.	
<u>Original Task 6 is revised to replace the original language in its entirety and to read as follows:</u> **Task 6:** Depth Integrated Ambient Sample Analysis for Sites RA-12 and RA-15 **Description of Revision:** Contractor shall analyze samples collected under Task 5 for the parameters in Amendment Table 2 (below). Contractor shall analyze samples for up to a total of 16 sampling events. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than."	Samples shall be analyzed no later than holding times established by QA/QC documentation agreed upon by both parties prior to sample analysis. For purposes of invoices, the effective Task Milestone Date shall be the last day of each month.
<u>Original Task 7 is revised to replace the original language in its entirety and to read as follows:</u> **Task 7:** Depth Integrated Event Sample Collection at Site RA-12 and RA-15 **Description of Revision:** Contractor shall collect stream depth integrated samples from Sites RA-12 and RA-15 for event sampling events (for up to a total of 12 sampling events) from March 2014 to October 2014 (as conditions permits). Samples shall be collected as near to peak flow as possible. Samples collected as a part of this activity shall be coded as RATHBUN 2013-2014.	No later than October 31, 2014
<u>Original Task 8 is revised to replace the original language in its entirety and to read as follows:</u> **Task 8:** Depth Integrated Event Sample Analysis for Sites RA-12 and RA-15 **Description of Revision:** Contractor shall analyze samples collected under Task 5 for the parameters in Amendment Table 3 (below). Contractor shall analyze samples for up to a total of 16 sampling events. For analytical results below the quantitation limit, the test quantitation limit shall be reported as "less than."	Samples shall be analyzed no later than holding times established by QA/QC documentation agreed upon by both parties prior to sample analysis. For purposes of invoices, the effective Task Milestone Date shall be the last day of each month.
<u>Original Task 11 is revised to replace the original language in its entirety and to read as follows:</u> **Task 11:** Equipment **Description of Revision:** Contractor shall purchase a YSI EXO2 Sonde and needed probes and accessories per DNR specifications for use in lake monitoring. This equipment obtained for use with the project shall be property of DNR.	Equipment shall be purchased by no later than March 31, 2014.

Amendment Table 1. Lake Monitoring Parameters (for each depth sampled by DNR)

	Upper Mixed Zone:	**Thermocline:**	**Bottom:**	**Cost per test:**
Total phosphorus	X	X	X	$ 13.50
Orthophosphate	X	X	X	$ 13.50
Total suspended solids	X	X	X	$ 13.50
Ammonia	X	X	X	$ 13.50
Nitrate+nitrite	X	X	X	$ 13.50
Total Kjeldahl nitrogen	X	X	X	$ 34.50
Chloride	X	X	X	$ 13.50
Chlorophyll a	X			$ 41.00
Total Dissolved Solids	X	X	X	$ 13.50
Total cost per sample:	**$ 170.00**	**$ 129.00**	**$ 129.00**	

Amendment Table 2. **Ambient Sample Monitoring Analytes at Depth Integrated (DI) Location**

Suspended Sediment Concentration (DI sample)
Particle Size Distribution (DI sample)
Total Phosphate as P (DI sample)
Orthophosphate as P (DI sample)

Amendment Table 3. **Event Sample Monitoring Analytes at Depth Integrated (DI) Location**

Suspended Sediment Concentration (DI sample)	Total Suspended Solids (grab sample)
Particle Size Distribution (DI sample)	Total Phosphate as P (grab sample)
Total Phosphate as P (DI sample)	Orthophosphate as P (grab sample)
Orthophosphate as P(DI sample)	

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
ATTORNEY GENERAL REFERRALS
February, 2014

Name, Location and Region Number	Program	Alleged Violation	DNR Action	New or Updated Status	Date
Grain Processing Corporation Muscatine (6)	Air Quality Wastewater	Operation Without (PSD) Permit; Emission Standards – Particulate; Failure to Comply - MON; Construction Without WW Permit	Referred to Attorney General	Referred	4/19/11
				Petition Filed	12/01/11
				Answer	1/10/12
				CLAM Motion to Intervene	1/24/12
				Hearing on Intervention	4/03/12
				Ruling Granting CLAM Intervention	6/25/12
				Trial Date	5/19/14
Iowa Farm Bureau Federation et. al. Polk Co. (5)	Wastewater	Judicial Review of Antidegradation Rules	Attorney General	Petition Filed	10/04/10
				State's Answer	10/27/10
				Motion to Intervene by Sierra Club	11/03/10
				Motion to Intervene by Iowa Environmental Council and Environmental Law & Policy Center	12/15/10
				Hearing on Intervention	1/20/11
				Ruling Granting Intervention	2/03/11
				State's Motion for Summary Judgment; Undisputed Facts; Affidavits; Appendix and Memorandum	4/29/11
				Hearing on Petitioners' Motions	9/30/11
				Ruling Denying Petitioners' Motions	10/14/11
				Petitioner's Application for Interlocutory Appeal	10/31/11
				Petitioner's Motion for Stay	11/08/11
				State's Resistance to Application	11/14/11
				State's Resistance to Motion for Stay	11/16/11
				Hearing on Motion for Stay	11/30/11
				Supreme Court Denial of Interlocutory Appeal	11/23/11
				Petitioners' Motion for Stay Hearing Withdrawn	11/30/11
				Petitioners' Motion for Summary Judgment and Cross-Motion for Summary Judgment	12/21/11
				Hearing on Motions for Summary Judgment	1/18/12
				Ruling Granting State's Motion for Summary Judgment	3/29/12
				Notice of Appeal	4/26/12
				Petitioner's Proof Brief	9/28/12
				State's Proof Brief	11/28/12
				State's Designation of Appendix	11/28/12
				Appendix Filed	1/23/13
				Respondent-Intervenors' Proof Brief	12/03/12
				Petitioners' Proof Reply Brief	2/05/13
				Petitioner's Final Brief	2/06/13
				Petitioner's Final Reply Brief	2/06/13
				State's Final Brief	2/06/13
				Respondent-Intervenor's Final Brief	2/08/13
				Oral Argument before Iowa Supreme Court	10/09/13

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
ATTORNEY GENERAL REFERRALS
February, 2014

Name, Location and Region Number	Program	Alleged Violation	DNR Action	New or Updated Status	Date
McMains, Phil Appanoose Co. (5)	Air Quality Solid Waste	Open Burning Illegal Disposal	Referred to Attorney General	Referred Petition Filed Answer Motion for Leave to Amend Petition	6/19/12 8/08/13 9/03/13 1/02/14
North Central Iowa Regional SWA Fort Dodge (2)	Solid Waste	Operating Permit Violations	Referred to Attorney General	Referred	9/17/13
North Iowa Area Solid Waste Agency Sheldon (3) **UPDATED**	Solid Waste	Unapproved Leachate Collection System	Referred to Attorney General	Referred Petition Filed Answer Third Party Petition Against Elliot Waddell and Five States Engineering, PLC State's Resistance to Demand for Jury Trial Hearing Regarding Jury Trial Demand Ruling and Order Denying Defendant's Jury Demand Ruling Nunc Pro Tunc Granting 3rd Party Jury Demand	1/15/13 9/26/13 10/11/13 10/11/13 10/23/13 11/25/13 1/07/14 1/28/14
Passehl, Jerry Latimer (2) **UPDATED**	Solid Waste; Wastewater; Hazardous Condition	Illegal Disposal; Operation Without Permit; Pollution Prevention Plan Violations; Failure to Notify	Order/Penalty	Referred Petition Filed State's Motion for Summary Judgment Trial Date Hearing on State's Motion for Partial Summary Judgment Ruling granting State's Motion for Partial Summary Judgment State's Motion for Sanctions Hearing on Motion for Sanctions Order Regarding Sanctions Trial Ruling ($36,110/Civil; $4,150.17/Admin. & Injunction) Defendant's Motion to Enlarge and Amend State's Resistance Hearing on Defendant's Motion to Enlarge and Amend Order Denying Motion to Enlarge and Amend Notice of Appeal Defendant's Proof Brief Defendant's Amended Proof Brief Oral Argument Date Before Court Of Appeals Court of Appeals Decision Affirming District Court Ruling Defendant's Motion for Further Review State's Resistance to Further Review	3/16/10 12/27/10 8/25/11 9/13/12 6/01/12 6/06/12 6/09/12 7/17/12 7/20/12 9/14/12 10/09/12 10/24/12 11/01/12 12/17/12 12/21/12 1/18/13 5/13/13 5/24/13 11/07/13 12/05/13 12/23/13 1/06/14

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
ATTORNEY GENERAL REFERRALS
February, 2014

Name, Location and Region Number	Program	Alleged Violation	DNR Action	New or Updated Status	Date
Sioux-Preme Packaging Co. Sioux Center (3)	Wastewater	Prohibited Discharge; Operation Violations; WQ Violations – General Criteria	Referred to Attorney General	Referred	9/17/13
Van Beek, Vern Inwood (3)	Animal Feeding Operation	Prohibited Discharge	Referred to Attorney General	Referred	10/16/12

Iowa Department of Natural Resources
Environmental Services
Quarterly Report of WW By-passes

During the period October 1, 2013 through December 31, 2013, 46 reports of a wastewater by-pass were received. A general summary and count by field office is presented below. This does not include by-passes resulting from precipitation events or by-passes resulting in basement backups.

Month	Total	Avg. Length (days)	Avg. Volume (MGD)	Sampling Required	Fish Kill
1ST Quarter '13	53(51)	0.297	0.015	6	0(0)
2ND Quarter '13	97(35)	0.171	0.035	22	0(0)
3RD Quarter '13	46(57)	0.251	0.054	3	0(0)
4TH Quarter '13	46(40)	0.185	0.002	1	0(0)

(numbers in parentheses are for same period last year)

Total Number of Incidents per Field Office This Quarter:

Field Office	**1**	**2**	**3**	**4**	**5**	**6**
Reports	5	3	9	13	6	10

Monthly Variance Report
December 2013

Item No.	Facility/City	Program	DNR Reviewer	Subject	Decision	Date
1	City of North Liberty STP	Wastewater	Marty Jacobs	variance from wastewater facilities design standards for installation of gravity sewer by directional boring	approved	12/4/2013
2	City of West Branch STP	Wastewater	Marty Jacobs	variance from wastewater facilities design standards for installation of gravity sewer by directional boring	approved	12/4/2013
3	City of Burlington STP	Wastewater	Marty Jacobs	variance from wastewater facilities design standards for installation of gravity sewer by directional boring	approved	12/4/2013
4	USG	Air Quality	Reid Bermel	variance to replace control equipment equipment associated on EP-08 prior to construction permit being issued	approved	12/4/2013
5	Hydrite Chemical Co	Air Quality	Ann Seda	variance to increase maximum production rate. Variance to operate at higher production rate during scheduled stack test.	approved	12/6/2013
6	Iowa Army Ammunition Plant	Air Quality	Dennis Thielen	variance for extention to allow Title V permit be modified to remove requirement to stack test.	approved	12/9/2013
7	Muscatine Power & Water	Air Quality	Reid Bermel	variance to combust wood chips/sawdust with coal in boilers without obtaining modified permit.	partially approved	12/11/2013
8	IPL - Burlington	Air Quality	Reid Bermel	variance to burn sludge material in plants main boiler	approved	12/12/2013
9	Aveka Nutra Processing	Air Quality	Ann Seda	variance to increase maximum hourly wet feed rate to 5000 lb/hr fo stack testing on 1/20/14.	approved	12/13/2013
10	Grain Processing Corp	Air Quality	Dennis Thielen	variance from code to begin construction of flare to reduce emissions from tanks before construction permits being issued.	approved	12/19/2013
11	LL Pelling Co	Air Quality	Dennis Thielen	variance to extend NSPS OOO testing requiremeent until spring for asphalt screen crusher conveyor.	denied	12/23/2013
12	Pella Corp - Sioux Center	Air Quality	Ann Seda	variance to modify operating limits found in six of facility's construction permits for emission points.	approved	12/27/2013
13	Kossuth County Sanitary Landfill	Sanitary Disposal	Michael Smith	variance to replace 2007 groundwater sampling requirements with 2008 requirements. varinace to implement 2007 monitoring well maintenance and performance reevaluation plan that doesn't require in situ permeability testing every five years.	approved	12/9/2013
14	City of Cedar Rapids STP	Wastewater	Jeremy Enano	variance from design standards for installing sanitary sewer by means of pope bursting instead of by open cut construction.	approved	12/10/2014
15	Dubuque Metropolitan Area Solid Waste Agency	ESD	Leslie Goldsmith	Requests substitution for EMS reporting for requirements.	approved	12/12/2013
16	City of Waukee	Flood Plains	Brian Churchill	variance to freeboard criterion that low chord of bridge must be set 3 feet above 50-year flood elevation	approved	12/18/2013
17	Iowa DNR	Water Supply Construction	AJ Montefusco	variance to separation of water mains from sanitary sewers and storm sewers.	approved	12/18/2013

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
February, 2014

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS
11/27/01	Dallas County Care Facility	5	Order/Penalty	WW	Hansen	10/03 – Letter to County attorney regarding appeal resolution. 1/04 – Letter to attorney regarding appeal. 4/04 – Dept. letter to attorney regarding appeal. 9/04 – Dept. letter to attorney regarding appeal. 6/26/07 – Appeal resolved. Facility connected to City WWTF. Consent order to be issued. 1/29/13 – Order amendment drafted.
4/08/04	Silver Creek Feeders	4	Permit Conditions	AFO	Clark	12/9/11 –Meeting with Silver Creek officials, DNR staff and attorneys.
1/05/09	River Highlands Homeowner's Association	6	Order/Penalty	WS	Hansen	10/09- WS in partial compliance with order after repair to well in 9/09. 5/11 – Now in compliance with order. Settlement offer to River Highlands. 6/2011- Response received from River Highlands**.** 7/13 – To be set for hearing. 8/27/13 – Conference call to discuss settlement. 9/13 – Settled – Consent amendment to be sent to River Highlands for signature.
8/17/09	Phoenix C & D Recycling, Inc.	5	Permit Revocation	SW	Tack	Proposed Decision issued 5/21/2010. DNR permit revocation upheld. **EPC appeal to be presented on 2/18/14.**
10/29/09	Harlan Rudd; Karen Rudd; dba Rudd Brothers Tires	6	Order/Penalty	UT	Brees	Informal negotiation. CADR was submitted, partially rejected with options. Settlement letter sent 2/24/10.
12/16/09	Guy Thomas	4	Order/Penalty	UT	Brees	Oral agreement for tank removal prior to April 1, 2010. Continued negotiation on final settlement.
2/25/10	Higman Sand & Gravel Inc.	3	Order/Penalty	FP	Clark	Negotiating before filing.
3/11/10	Bondurant, City of	5	Order/Penalty	WW	Hansen	7/2013-On hold pending further investigation.
11/3/2010	Wendall Abkes	2	Order/Penalty	SW	Schoenebaum	Settlement phone call held. Mr. Abkes indicated he would enter into a settlement. 6/12/13 -- Offer to settle sent via certified mail. Letter was returned as unclaimed.
12/29/10	Griffin Pipe Products Co., Inc.	4	Permit Conditions	AQ	Preziosi	Last communication to appellant on 10/22/13.
1/31/11	Griffin Pipe products Co., Inc.	4	Tax Certification Request	AQ	Preziosi	**Settled in concept 1/28/14.**
2/28/11	Manson, City of	3	Order/Penalty	WS	Hansen	4/1/11 – Settlement conference held with City. 6/22/11- Settlement offer received from City attorney. 6/28/11- More information requested from City attorney concerning the settlement proposal.

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
February, 2014

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS
						11/29/11- Settlement meeting with City regarding new well project. 12/2011 – City proceeding with project. 6/2012**-** Contractor worked on new well to remove debris in well. Test pump to be installed to do test of well capacity. 07/2012- City to abandon new well and select new site for well to increase PWS capacity. 10/2012- Water plant work to be done week of 12/10/12. 5/2013- New well project & appeal on hold, pending UDSA funding decision. 6/2/13 – USDA funding decision received. 6/26/13 – New bid date for well project. . 7/2013- Tentative schedule for new well received from City's engineer**.** 8/13 – Drilling on test well begun by contractor. 9/13 – Test well not productive, new well site approved by Dept. New test well to be drilled. **10/13-** Test well drilled but not successful. Test well abandoned. City Council to decide on next step.
6-15-12	Vermeer Manufacturing Co.	5	Permit Conditions	AQ	Preziosi	Internal meeting held 10/22/13.
8-27-12	Ag Processing, Inc.; Sergeant Bluff	4	Permit Conditions	AQ	Preziosi	**Meeting with appellant set for 1-31-14.**
8-29-12	Alcoa	6	Permit Conditions	AQ	Preziosi	**Settled in concept 1/28/14.**
10-01-12	Pet Memories	3	Order/Penalty	SW	Tack	**Proposed Decision upheld by EPC on 1/21/14.**
11-21-12	Ag Processing Inc.	6	Permit Conditions	AQ	Preziosi	Last communication from appellant 10/17/13. **Continuing negotiations and last communication internally 1/15/14.**
3-04-13	Anderson Excavating Co., Inc.	4	Order/Penalty	SW	Tack	Negotiating before filing.
6-20-13	Joseph and Carol Jahnke	1	Dam Application	FP	Schoenebaum	**Proposed decision 1/8/14. 1/21/14 – EPC affirmed decision. The Jahnkes have 30 days to appeal.**
9-09-13	David Hansen; Debra D. Imhoff	6	Order/Penalty	FP	Schoenebaum	Appeal filed 9/9/13.
10-28-13	Regional Environmental Improvement Commission/Iowa Co. SLF	6	Permit Amendment	WW	Tack	Negotiating before filing.
11-07-13	Linn County Conservation Board Pinicon Ridge Park	6	Permit Conditions	WS	Hansen	Negotiating before filing.
1-02-14	P & J Pork, LLC		Construction Permit Denial	AFO	Clark	New case.

DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
CONTESTED CASES
February, 2014

DATE RECEIVED	NAME OF CASE	F.O.	ACTION APPEALED	PROGRAM	ASSIGNED TO	STATUS
1/16/14	Council Bluffs Water Works	4	Permit Conditions	WW	Hansen	New case.
1/21/14	AG Processing, Inc.		Permit Conditions	AQ	Preziosi	**Meeting with appellant set for 1/31/14.**

DATE: February, 2014

TO: EPC

FROM: Ed Tormey

RE: Enforcement Report Update

The following new enforcement actions were taken during this reporting period:

Name, Location and Field Office Number	Program	Alleged Violation	Action	Date
The Maschhoffs, Inc. Buckeye (2)	Air Quality Wastewater	Construction Without Permit; Monitoring/Reporting; Construction Without Permit; Discharge Limits	Consent Order $10,000	1/06/14
Joe M. Seng Clinton Co. (6)	Air Quality	Asbestos	Consent Order $3,000	1/10/14
Quarry Services, Inc. Fort Dodge (2)	Wastewater	Stormwater – Operation Without Permit	Consent Order $5,000	1/24/14
City View Farms, LLC O'Brien Co. (3)	Animal Feeding Operation	Prohibited Discharge – Open Feedlot; WQ Violations – General Criteria	Consent Order $10,000	1/28/14

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION COMMISSION
RULE MAKING STATUS REPORT
February, 2014

Proposal	Stakeholder Engagement	Sent for Governor's Pre-Approval (Job Impact) Statement		Notice to EPC	Notice Published	ARRC No.	ARRC Mtg.	Hearing	Comment Period	Final Summary To EPC	Rules Adopted	Rules Published	ARRC No.	ARRC Mtg.	Rule Effective
1. Ch. 20, 21, 22, 31 and 33 – Air Quality Program Rules – Nonattainment New Source Review		7/24/13	8/02/13	8/20/13	9/18/13	1016C	10/08/13	10/21/13	10/21/13	11/19/13	11/19/13	12/11/13	1227C	1/10/14	1/15/14
2. Ch. 22, 23 –AQ – Grain Vacuuming		11/22/13													
3. Ch. 61 - Water Quality Standards, Section 401 Certification of Section 404 Regional Permit (RP 7)		1/16/14	1/16/14	2/18/14	*3/19/14		*4/07/14								
3. Ch. 64 – Storm Water Permits		8/27/13	9/18/13	10/14/13	11/13/13	1176C	12/10/13	12/12/13	12/12/13	1/21/14	1/21/14	*2/19/14	1337C	*3/03/14	*3/26/14
4. Ch. 93 – Wastewater Assistance Program		8/27/13	9/18/13	10/14/13	11/13/13	1177C	12/10/13	12/04/13	12/04/13	1/21/14	1/21/14	*2/19/14	1336C	*3/03/14	*3/26/14

Iowa Department of Natural Resources
Environmental Services Division
Report of Manure Releases

During the period October 1, 2013, through December 31, 2013, 31 reports of manure releases were forwarded to the central office. A general summary and count by field office is presented below.

		Total Incidents		Surface Water Impacts		Feedlot		Confinement		Land Application		Transport		Hog		Cattle		Poultry		Other	
Month	**Year**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**	**Cur**	**Yr Ago**
Jan	2013	1	3	0	0	0	0	1	2	0	0	0	1	1	2	0	0	0	1	0	0
Feb	2013	12	0	0	0	0	0	12	0	0	0	0	0	12	0	0	0	0	0	0	0
Mar	2013	14	0	0	0	0	0	14	0	0	0	0	0	14	0	0	0	0	0	0	0
Apr	2013	2	2	1	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0
May	2013	6	3	2	0	0	0	2	1	2	0	2	2	5	1	1	2	0	0	0	0
Jun	2013	3	0	1	0	0	0	1	0	0	0	2	0	2	0	1	0	0	0	0	0
Jul	2013	2	5	0	0	0	1	0	1	1	0	1	3	1	3	1	1	0	1	0	0
Aug	2013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sep	2013	5	9	1	0	0	0	5	7	0	2	0	0	3	8	2	1	0	0	0	0
Oct	2013	10	14	2	0	0	0	5	8	0	0	5	6	7	10	3	1	0	3	0	0
Nov	2013	12	9	2	0	0	0	3	3	1	3	8	3	11	8	1	0	0	1	0	0
Dec	2013	9	1	1	1	0	0	2	0	0	0	7	0	4	0	3	0	2	0	0	1
	Total	**76**	**46**	**10**	**1**	**0**	**1**	**47**	**24**	**4**	**5**	**25**	**15**	**60**	**34**	**14**	**5**	**2**	**6**	**0**	**1**

Total Number of Incidents per Field Office for the Selected Period	**Field Office 1**		**Field Office 2**		**Field Office 3**		**Field Office 4**		**Field Office 5**		**Field Office 6**	
	Current	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**	**Current**	**Previous**
Total	4	2	6	11	10	4	5	5	0	1	6	1

Iowa Department of Natural Resources
Environmental Services Division
Report of Hazardous Conditions

During the period October 1, 2013, through December 31, 2013, 162 reports of hazardous conditions were forwarded to the central office. A general summary and count by field office is presented below. This does not include releases from underground storage tanks, which are reported separately.

				Substance						Mode											
		Total Incidents		Agrichemical		Petroleum Products		Other Chemicals		Transport		Fixed Facility		Pipeline		Railroad		Fire		Other*	
Month	Year	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago	Cur	Yr Ago
Jan	2013	57	42	4	5	32	25	21	12	9	10	43	26	1	0	1	0	1	1	2	5
Feb	2013	50	51	1	3	32	32	17	16	15	11	32	34	0	0	1	1	1	3	1	2
Mar	2013	53	77	1	14	45	33	7	30	11	17	35	53	2	0	1	1	0	0	4	6
Apr	2013	91	83	25	32	49	36	17	15	27	21	53	56	1	1	4	0	0	1	6	4
May	2013	115	90	25	20	75	47	15	23	30	23	72	61	1	1	3	0	2	2	7	3
Jun	2013	70	62	8	7	47	37	15	18	12	16	54	41	0	0	2	1	1	1	1	3
Jul	2013	52	68	7	10	30	44	15	14	13	9	34	52	2	1	3	1	0	1	0	4
Aug	2013	56	64	4	9	34	33	18	22	10	19	34	41	3	0	2	1	1	1	6	2
Sep	2013	62	72	7	10	41	42	14	20	9	19	47	43	3	4	1	0	1	1	1	5
Oct	2013	58	55	7	6	38	41	13	8	14	20	39	24	2	2	1	3	0	2	2	4
Nov	2013	57	60	8	17	29	25	20	18	15	11	40	43	1	1	1	3	0	0	0	2
Dec	2013	47	45	6	1	28	26	13	18	17	11	27	30	1	0	2	2	0	1	0	1
	Total	**768**	**769**	**103**	**134**	**480**	**421**	**185**	**214**	**182**	**187**	**510**	**504**	**17**	**10**	**22**	**13**	**7**	**14**	**30**	**41**

*Other includes dumping, theft, vandalism and unknown

Total Number of Incidents per Field Office This Selected Period	Field Office 1		Field Office 2		Field Office 3		Field Office 4		Field Office 5		Field Office 6	
	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago	Current	Year Ago
Total	27	18	23	20	20	27	28	23	32	41	23	30

IOWA DEPARTMENT OF NATURAL RESOURCES
COMPLIANCE AND ENFORCEMENT BUREAU

DATE: February 1, 2014

TO: Environmental Protection Commission

FROM: Ed Tormey

SUBJECT: Summary of Administrative Penalties

The following administrative penalties are due:

NAME/LOCATION	PROGRAM	AMOUNT	DUE DATE
Robert and Sally Shelley (Guthrie Center)	**SW**	**1,000**	**3-04-91**
Daryl & Karen Hollingsworth d/b/a Medora Store(Indianola)	**UT**	**4,126**	**3-15-96**
Greg Morton; Brenda Hornyak (Decatur Co.)	**SW/AQ/WW**	**3,000**	**11-04-98**
James Harter (Fairfield)	**WW**	**1,336**	**8-01-01**
Wisconsin North dba National Petroleum, Inc. (Clinton)	**UT**	**5,000**	**8-04-01**
# Practical Pig Corporation (Clinton Co.)	**AFO**	**2,000**	**5-26-02**
Midway Oil Co.; David Requet (Davenport)	**UT**	**5,355**	**9-20-02**
Midway Oil Co.; David Requet; John Bliss	**UT**	**44,900**	**2-28-03**
Green Valley Mobile Home Park (Mt. Pleasant)	WW	5,000	4-23-03
Midway Oil Company (West Branch)	**UT**	**7,300**	**5-03-03**
Midway Oil Company (Davenport)	**UT**	**5,790**	**5-03-03**
Albert Miller (Kalona)	**AQ/SW**	**9,810**	**9-26-03**
Mike Messerschmidt (Martinsburg)	**AQ/SW**	**500**	**4-13-04**
Interchange Service Co., Inc., et.al. (Onawa)	WW	6,000	5-07-04
# Dunphy Poultry (Union Co.)	**AFO**	**1,500**	**6-27-04**
# Cash Brewer (Cherokee Co.)	**AFO/SW**	**10,000**	**8-25-04**
# Doorenbos Poultry; Scott Doorenbos (Sioux Co.)	**AFO**	**1,500**	**10-09-04**
Rock N Row Adventures (Eldora)	WS	3,000	10-23-04
# Doug Sweeney (O'Brien Co.)	**AFO**	**375**	**12-21-04**
Harold Linnaberry (Clinton Co.)	SW	1,000	5-18-05
# Joel McNeill (Kossuth Co.)	**AFO**	**2,460**	**1 21-06**
Affordable Asbestos Removal, Inc. (Monticello)	**AQ**	**7,000**	**4-28-06**
# Troy VanBeek (Lyon Co.)	**AFO**	**3,500**	**10-16-06**
Larry Bergen (Worth Co.)	**AQ/SW**	**257**	**11-01-06**
# Joshua Van Der Weide (Lyon Co.)	**AFO**	**3,500**	**2-25-08**
Karl Molyneux (What Cheer)	**AQ/SW**	**960**	**7-19-08**
George Kramer (Clinton Co.)	**AQ/SW**	**1,500**	**11-09-08**
Jon Knabel (Clinton Co.)	**AQ/SW**	**2,000**	**12-16-08**
Stuart Yoder (Johnson Co.)	**AQ/SW**	**224**	**2-11-09**
# Robert Fangmann (Dubuque Co.)	**AFO**	**396**	**6-01-09**
# Rick Renken (LeMars)	**AFO**	**996**	**7-03-09**
# Brian Lill (Sioux Co.)	**AFO**	**3,342**	**7-18-09**
# Lane Bachman (Calhoun Co.)	**AFO**	**3,885**	**10-08-09**
Denny Geer (New Market)	**SW**	**9,476**	**10-31-09**
Shrey Petroleum; Palean Oil; Profuel Three (Keokuk)	UT	10,000	3-19-10
Melvin Wellik; Wellik-DeWitt Implement (Britt)	**AQ/SW**	**2,900**	**4-08-10**
Alchemist USA, LLC; Ravinder Singh (Malcom)	UT	8,260	5-03-10
# LJ Unlimited, LLC (Franklin Co.)	AFO/AQ/SW	3,500	5-27-10
Bret Cassens; J & J Pit Stop (Columbus Junction)	UT	8,700	6-20-10

#Animal Feeding Operation
BOLD Entries Have Been Referred to DRF

# Christopher P. Hardt (Kossuth Co.)	AFO	2,000	7-07-10
AKD Investments, LLC; H.M. Mart, Inc. (Blue Grass)	UT	6,900	8-06-10
Eastern Hills Baptist Church (Council Bluffs)	WS	1,250	11-29-10
James Bailey; James Bailey Construction (Douds)	**AQ/SW**	**634**	**12-01-10**
Jeff Grooms; Floris One Stop (Floris)	UT	7	12-09-10
# Joe McNeill (Kossuth Co.)	**AFO**	**2,500**	**12-23-10**
Gonzalez & Sons Express, Inc. (DeSoto)	**WW**	**8,000**	**4-20-11**
David C. Kuhlemeier (Cerro Gordo Co.)	**AQ/SW**	**2,000**	**6-30-11**
Steve Friesth (Webster Co.)	**AQ/SW**	**8,400**	**11-26-11**
Josh Oetken (Worth Co.)	**AQ/SW**	**8,495**	**3-11-12**
Jeffrey G. Gerritson (O'Brien Co.)	**SW**	**2,000**	**4-16-12**
Bhupinder Gangahar/Saroj Gangahar/International Business	**UT**	**7,935**	**4-20-12**
Finney Industrial Painting, Inc. (Fairfield)	**AQ/WW**	**5,250**	**4-23-12**
Terry Philips; TK Enterprises (Washington Co.)	**AQ/WW**	**7,000**	**5-30-12**
# Boerderij De Vedhoek, LLC (Butler Co.)	**AFO**	**8,500**	**11-16-12**
James L. Heal; A-1 Imports (Homestead)	WW/SW	1,800	1-08-13
Sun-Jon, Inc.; Iowa Poultry (Johnson Co.)	WW	3,000	1-08-13
Noah Coppess (Cedar Co.)	AQ/SW	7,500	2-23-13
Shane Rechkemmer (Fayette Co.)	**SW**	**1,000**	**3-01-13**
Jeff Grooms; Floris One Stop (Floris)	**UT**	**3,500**	**3-01-13**
Michael Lee Liphardt aka Melvin Liphardt (Clinton Co.	**AQ/SW**	**2,000**	**3-05-13**
B Petro Corporation (Cedar Rapids)	UT	7,728	5-13-13
Bernard Michelson (Hancock Co.)	AQ/SW	2,500	4-26-13
Ken Odom (Iowa Co.)	AQ/SW	3,000	4-26-13
Jacob Reed (Mahaska Co.)	AQ/SW	1,500	6-10-13
River Trading Company, Ltd. (Muscatine)	WW	3,000	9-15-13
Robert Downing (Mahaska Co.)	AQ/SW	10,000	11-15-13
# Steve and Paul Groth; Groth Farms (Mitchell Co.)	AFO	3,000	11-17-13
Shriners Hospital for Children, Inc. (Des Moines)	UT	8,890	12-03-13
Golden Grain Energy, LLC (Mason City)	WW	10,000	12-14-13
Joseph E. Skelley; Ssippi Valley Saloon, LLC (Burlington)	AQ	3,300	12-29-13
# J & J Pork, LLC (Iowa Co.)	AFO	5,000	1-01-14
Northern Filter Media, Inc. (Muscatine Co.)	AQ	1,000	1-20-14
Larry Eisenhauer (Woodbury Co.)	AQ/SW	4,675	3-01-14
The Maschhoffs, Inc. (Buckeye)	AQ/WW	10,000	2-06-14
Joe M. Seng (Clinton Co.)	AQ	3,000	2-10-14
	TOTAL	**357,612**	

The following penalties have been placed on payment plans:

*** Reginald Parcel (Henry Co.)**	**AQ/SW**	**110**	**4-23-05**
*** Country Stores of Carroll, Ltd. (Carroll)**	**UT**	**1,408**	**6-06-05**
*** Douglas Bloomquist (Webster Co.)**	**AQ/SW**	**3,500**	**12-01-07**
* Jack Knudson (Irwin)	UT	10,000	1-15-08
*** Craig Burns (Postville)**	**WW**	**950**	**7-15-08**
# Jerry Passehl (Latimer)	SW/WW/HC	2,695	7-01-09
Jerry Wernimont (Carroll)	**AQ/SW**	**1,500**	**4-19-10**
# Ernest Greiner (Keokuk Co.)	**AFO**	**500**	**10-10-10**
Quad City Drum Recycling Co., Inc. (Davenport)	AQ	125	9-01-12
John Kletsch (Superior)	AQ	1,150	11-01-12
Ernest Poyzer; Alan Poyzer; Dean Poyzer (Emmet Co.)	AQ/SW	290	1-15-14
Jim Scallon (Butler Co.)	SW	700	4-15-13
R.H. Hummer Jr., Inc.; 2161 Highway 6 Trail (Iowa Co.)	AQ/SW	3,643	9-15-13

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Patrick Baker; Stockton Auto (Davenport)	AQ/SW	1,079	2-15-14
Anthony Sheeder (Guthrie Co.)	AFO	625	2-15-14
Air Advantage, Inc. (Mt. Pleasant)	WW	4,500	4-01-14
Ellsworth Excavating Co. (Muscatine Co.)	AQ/SW	1,350	1-01-14
# Steve Grettenberg; Dragster LLC	AFO	5,750	1-20-14
Mid River Marine Service and Storage (North Liberty)	WS	5,720	9-30-13
Lonnie Bryant; Sierra Bryant; Bryant's MHP (Keokuk)	WW	500	2-01-14
Stephan A. Palen (Wapello Co.)	AQ	2,392	1-01-13
	TOTAL	**48,487**	

The following administrative penalties have been appealed:

NAME/LOCATION	PROGRAM	AMOUNT
Dallas County Care Facility (Adel)	WW	5,000
River Highlands Homeowner's Association	WS	10,000
Guy Thomas (Council Bluffs)	UT	10,000
Harlan Rudd; Karen Rudd; Rudd Bros. Tires (Drakesville)	UT	10,000
Bondurant, City of	WW	10,000
Higman Sand and Gravel, Inc. (Plymouth Co.)	FP	10,000
Helen and Virgil Homer; Grandmas Snack Shop; Preston White (Aredale)	WS	8,461
Manson, City of	WS	10,000
Wendall Abkes (Parkersburg)	SW	7,000
Keith Durand; Durand Construction (Lee Co.)	WW	500
Pet Memories, Inc. (Cedar Co.)	SW	10,000
Anderson Excavating Company, Inc. (Pottawattamie Co.)	SW	10,000
Massey Properties, LLC; The Wharf (Dubuque)	WS	10,000
David Hansen; Debra Imhoff (Wilton)	FP	6,000
	TOTAL	**116,961**

The following administrative penalties have been collected:

NAME/LOCATION	PROGRAM	AMOUNT
Ellsworth Excavating Co. (Muscatine Co.)	AQ/SW	75
City View Farms East, LLC (Sioux Center)	AFO	10,000
Patrick Baker; Stockton Auto (Davenport)	AQ/SW	83
Lonnie Bryant; Sierra Bryant; Bryant's MHP (Keokuk)	WW	100
Quarry Services, Inc. (Ft. Dodge)	WW	5,000
# Lee Kovar (Iowa Co.)	AFO	104
	TOTAL	**15,362**

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