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*Cover page is the before and after pictures of the Roozeboom Abandoned Mine Lands/Watershed Cooperative Agreement Program Reclamation Project following spring 2007 planting*

## **I. Executive Summary**

During the 2007 Evaluation Year (EY), the Office of Surface Mining Reclamation and Enforcement (OSM) conducted oversight evaluations of the Iowa Department of Agriculture & Land Stewardship, Division of Soil Conservation (IDSC) Regulatory (bond forfeiture reclamation) and Abandoned Mine Land (AML) Programs. The oversight studies focused on the success of the IDSC in meeting the Surface Mining Control and Reclamation Act of 1977 (SMCRA) goals for environmental protection and prompt, effective reclamation of land mined for coal.

The Title V program in Iowa has not permitted a new mine site since 1992 and mining ceased in 1994. Therefore, the focus of this report is the State's progress in completion of the bond forfeiture reclamation rather than the normal permitting and inspection elements.

Studies in the areas of bond forfeiture reclamation projects and off-site impacts on these sites were conducted by OSM in support of OSM's national initiatives.

The following oversight topic reviews were completed:

### **Title V Studies**

- **Off-Site Impacts – Active Sites and Bond Forfeiture Sites.**

At the end of EY 2007, there are twelve remaining bond forfeiture sites on the IDSC inspectable units list. Eight inspectable units (IU's) are yet to be reclaimed and four IU's are in their one year required maintenance period. Five of these IU's contained seven hydrologic off-site impacts. Of the 12 remaining inspectable units, seven IU's, or 58%, are free from off-site impacts. The number of off-site impacts will be reduced as bond forfeiture reclamation is completed. All existing off-site impacts were identified prior to EY 2002.

During EY 2007, two bond forfeiture mine sites with off-site impacts were reclaimed. These sites were American Coal Corporation # 6, and the Star Coal Company Mine # 12. Both of these sites contained one minor hydrologic off-site impact which affected land and water resources.

- **Bond Forfeiture Reclamation Success.**

IDSC developed a reclamation schedule to reclaim the bond forfeiture sites. The reclamation schedule, dated July 2006, (Appendix A) identified 16 IU's, including 12 active IU's and four IU's that were in the one year required maintenance liability period.

At the end of the evaluation year (June 30, 2007), there were twelve IU's. Of these twelve IU's, four will have their required one year liability maintenance period end by

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December 2007 and will be removed from the IU list. This will leave eight bond forfeiture mine sites to be reclaimed. Reclamation contracts have been issued for American Coal Corporation Mine # 1A and Superior Coal Mine # 1. The American Coal Corporation Mine # 1 Wash Plant reclamation project was re-bid, with estimated construction beginning in the fall of 2007. This will leave five forfeiture sites remaining to have their reclamation contracts bid and awarded.

#### **Title IV Studies**

- **Iowa Abandoned Mine Land Inventory System (AMLIS) Certification and Data Accuracy.**

A review was completed by AFD to ensure accuracy of data input by the IDSC AML program into the AMLIS. Eight Problem Area Descriptions (PAD's) were reviewed. Current procedures in the Iowa AML Program are effective and ensure accuracy of AMLIS entries. The certification procedures identified in the OSM Director's letter of June 21, 2004, are still being utilized.

- **Iowa's Implementation of Commitments made in AML Project National Environmental Policy Act (NEPA) Documents**

Prior to the reclamation of an AML construction project, the IDSC consults with the required agencies to identify any environmental concerns that may arise. If the AML project activities affect environmental resources identified in the environmental document, special procedures or mitigation measures may be provided by the reviewing agencies.

The Alton Field Division (AFD) selected eight completed AML projects as a representative sample to confirm implementation of the environmental recommendations. The review found IDSC continues to implement all commitments and NEPA stipulations identified in the AML project documents.

- **Iowa AML Post-Construction Project Success**

The AFD completed a review of eight AML reclamation construction projects to evaluate the long-term success of the reclamation. The evaluation found the reclaimed sites were environmentally stable and design goals had been achieved. The reclamation had been completed in a cost-effective manner and all costs were determined to be reasonable and a benefit to society.

## II. Introduction

SMCRA created the OSM in the Department of the Interior. SMCRA provides authority to OSM to oversee the regulation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the IDSC and the effectiveness of the Iowa program in meeting the applicable purposes of SMCRA as specified in Section 102 of SMCRA. This report covers the period of July 1, 2006, to June 30, 2007.

The primary focus of the OSM oversight policy in Iowa for EY 2007 is an on-the-ground, results-oriented strategy that evaluates bond forfeiture and AML reclamation. To further the idea that oversight is a continuous and ongoing process, this annual report is structured to report on the progress of OSM and Iowa in conducting evaluations and completing oversight activities. The report also documents the IDSC accomplishments at the end of the evaluation period. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at OSM's AFD of the Mid-Continent Region (MCR) at 501 Belle Street, Alton, Illinois, 62002.

The following list of acronyms is used in this report:

ACSI	Appalachian Clean Streams Initiative
AFD	Alton Field Division
AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory System
EY	Evaluation Year
IDSC	Iowa Division of Soil Conservation
IU's	Inspectable Units
MCR	Mid-Continent Region
NEPA	National Environmental Policy Act
OSM	Office of Surface Mining Reclamation and Enforcement
PAD	Problem Area Description
PSD	Program Support Division
RREEF	Red Rock Environmental Education Foundation
SMCRA	Surface Mining Control and Reclamation Act of 1977
TIPS	Technical Innovation and Professional Services
WCAP	Watershed Cooperative Agreement Program

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### III. Overview of the Iowa Coal Mining Industry

Iowa's coal ranges from sub-bituminous to high-volatile C bituminous. The coal reserve base in Iowa is estimated to be 2.2 billion tons, or less than one-half of one percent of the United States' coal reserves. Coal-bearing areas cover about 18,468 square miles, or 33 percent of the State. Most coal seams in Iowa are less than five feet thick and have relatively high sulfur content.

Coal mining activities first began in Iowa in the 1840's. Since then, more than 35 companies extracted coal in 17 counties. A partial list of the counties where historical production occurred includes Polk, Story, Wapello, Van Buren, Keokuk, Davis, and Appanoose counties. Mining under SMCRA was concentrated in the four counties of Lucas, Marion, Mahaska, and Monroe. Annual production varied throughout Iowa's mining history, peaking in 1981 at 708,602 tons. Production subsequently declined until it ceased in 1994 with 58,855 tons mined during that year. Most of this production came from surface mining operations. Fifty people were employed in the industry at that time. Thin coal seams and high sulphur content of the coal contributed to the demise of coal mining in the State.

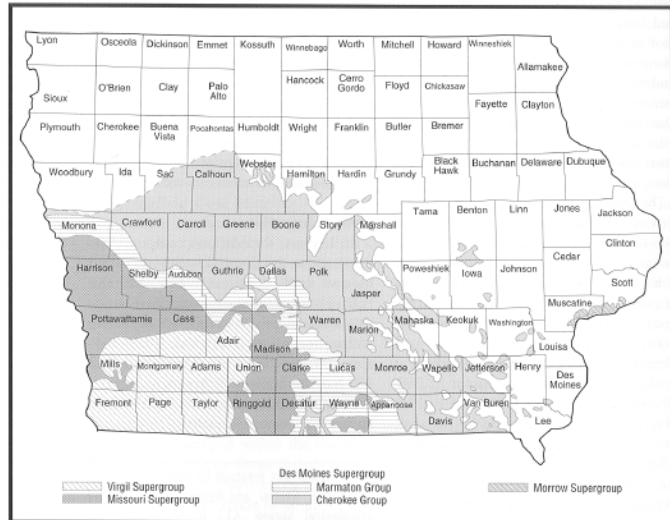


Fig. 1. General distribution of major Iowa coal deposits

#### Post SMCRA Mining Activity

At the end of EY 2007 (June 30, 2007), there were twelve IU's. The on the ground reclamation activities outlined in the July 2006, "Iowa Bond Forfeiture Reclamation Schedule," identified seven bond forfeiture mine sites to be under construction during EY 2007. Four of these sites were completed per the reclamation schedule or ahead of schedule and will have the required one year liability maintenance period end by December 2007, when they will be removed from the IU list. Three sites were not completed as scheduled. These three sites all relate to properties controlled by one private individual. Complications developed at all three sites which resulted in bond forfeiture reclamation delays, forcing the IDSC to modify its bond forfeiture reclamation schedule.

This leaves eight bond forfeiture mine sites to be reclaimed. Currently, contracts have been issued on two unreclaimed forfeiture sites. Another contract will be re-bid early fall 2007.

YEAR	IU'S	CHANGE
2007	12	-4
2006	16	-2
2005	18	-2
2004	20	-4
2003	24	0
2002	24	0
2001	24	0
2000	24	-4
1999	28	0
1998	28	0

### **Pre-SMCRA Mining Activity**

Before the enactment of SMCRA, approximately 13,764 acres were affected by coal mining in 17 Iowa counties. Within these counties, existing and hazardous conditions are recorded in AMLIS. The OSM Annual Report for 2006 noted the following AML accomplishments in Iowa.

<b>Problem Type</b>	<b>Total Units</b>	<b>Completed Units</b>
Miles of Clogged Streams	21.9	9.1
Acres of Clogged Stream Lands	2,137.4	728.0
Feet of Dangerous Highwalls	110,154.0	62,965.0
Acres of Dangerous Piles & Embankments	1,402.4	847.0
Hazardous water bodies	54.0	27.0
Vertical Opening	28.1	22.0

The cost to reclaim the remaining hazardous conditions listed in AMLIS as of June 30, 2006, is approximately \$54,066,635,000.00.

### **IV. Major Accomplishments/Issues/Innovations**

#### **Active Mine Unit Reclamation**

With the final Phase III reclamation liability bond release in November 2005 of the Jude Coal Company Mines #4 and #5, there are no active coal mine sites in Iowa.

#### **Bond Forfeiture Reclamation**

Following collection of bond forfeiture money for all the coal mine sites, the IDSC developed the "Iowa Bond Forfeiture Reclamation Schedule" to act as a guide and a commitment to reclaim bond forfeiture coal mine sites. The current schedule developed in July 2006, identified 16 inspectable units to be reclaimed, including 12 active IU's and four IU's that were in the one year required maintenance liability period.

At the end of the EY 2007 (June 30, 2007) there were twelve IU's. Of these twelve IU's, four sites were reclaimed during the evaluation period. These bond forfeiture mine sites include American Coal Corporation Mine # 6, Star Coal Company Mines # 7 and # 12, and Jude Coal Company Mine # 3. All these sites will have their one year liability maintenance period end by December 2007. They will then be removed from the IU list. This will leave eight bond forfeiture mine sites to be reclaimed.

Reclamation success on the reclaimed bond forfeiture coal mine sites is discussed in greater detail in Section V, Success in Achieving the Purposes of SMCRA. With the reclamation of

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these sites, the State is adhering to the principles of the approved reclamation schedule.

### **Adopted Program Amendments**

Since the adoption of the last regulatory program amendment on January 31, 2006, there are no outstanding program amendments.

### **Emergency Program**

The IDSC was notified of ten potential mine subsidence's during the evaluation year. Nine of those were investigated during the evaluation year. After making site visits and preliminary backhoe or drilling investigations, only three sites were determined to be actual mine subsidence emergencies. These emergency projects were the Beacon, Lang and Siefering Emergency Projects. No underground mine maps existed for any of the subsidence areas, nor was anyone aware of underground mines in the areas.



The Beacon Emergency Project was first reported on April 27, 2007, by the Mahaska County Engineer. The project consisted of a sinkhole measuring about 18 feet in diameter and ten feet deep which opened up in a resident's back yard and undermined a portion of a driveway and continued to enlarge. A brief drilling investigation demonstrated that the subsidence was most likely due to a room collapse. No voids were located underground and grouting was not necessary.

Reclamation of the subsidence feature was completed on May 25, 2007. The subsidence pit was partially excavated by backhoe and then backfilled with compacted rock and clay material. The clay material was covered with topsoil and seeded.

The Lang Emergency Project was first reported on May 4, 2007, by the landowner. This project consisted of a sinkhole measuring about 12 feet by ten feet and was about nine feet deep. The landowner said he could remember when his father worked in the coal mine and suspected the subsidence was due to a collapsed room. A backhoe investigation on June 21, 2007, validated the landowner's comment and the pit was backfilled immediately with compacted rock, clay and topsoil material.

The Siefering Emergency Project in Oskaloosa County was first reported on May 1, 2007, by the landowner. This project consisted of a sudden sinkhole subsidence on the east side of Kemble Place Apartment complex and a gradual subsidence on the west side of the complex.

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A preliminary drilling investigation encountered subsurface voids in both areas at about 45 feet deep. Voids were also located under the gas main to the apartment complex. A drilling and grouting project was designed, bid, and a contract was awarded.

Drilling and grouting stabilized the void from potential further collapse. Reclamation on the site was completed in late July, 2007. The cost of the project exceeded \$130,000.00.

### **Abandoned Mine Land Appalachian Clean Streams Initiative (ACSI) and Watershed Cooperative Agreement Program (WCAP) Sites**

During the review period, IDSC conducted reclamation activities at the following AML reclamation sites.

#### **East Marysville AML Project**

A contract was let for the East Marysville Reclamation Project to repair the pond basin because of mitigation requirements. The contract was let early in 2007 to install a bentonite liner in the basin of the pond to maintain normal pool elevation. The contractor was prohibited from initiating work because of seasonal weather until June. Once mobilized, the contractor pumped out the existing water, removed one foot of material, and placed the liner according to specifications. The material was replaced over the liner and above water line seeding was completed. Rainfall in the area of the project has been limited. With sufficient moisture the elevation of the pond should normalize.



#### **King Project**

The King Reclamation Project was divided into two contracts; a general excavation contract and a seeding/fencing contract. The excavation contract was let for bid during the previous evaluation year. All excavation activities including terrace construction and subgrade preparation were

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completed by December of 2006. The seeding and fencing contract was let for bid in the fall of 2006 and seeding activities were completed in May of 2007. Only fencing activities remained at the close of the evaluation year. Approximately 47 acres were reclaimed eliminating clogged stream, clogged stream land and industrial/residential waste features.

### **Jones Project**

The Jones Reclamation Project was completed in August 2006. Approximately 26 acres were reclaimed eliminating clogged stream, clogged stream land, dangerous highwalls, dangerous piles and embankments, industrial/residential waste and two vertical opening features. The site was reclaimed to a hay pasture with a newly created pond and associated wetland. The landowner stocked the pond, erected duck nesting boxes and installed a dock. Due to wet spring conditions, some erosion is present on the site and minor repairs are needed.



Constructed wet land

### **Mitchell Project AML/ACSI Project**

The Mitchell AML/ACSI clean stream is a large excavation project which has been divided into three construction phases to accommodate the limited availability of funding and the complexity of the site's design. The first phase of the reclamation project addressed 4,200 linear feet of dangerous highwalls, 0.2 mile of clogged streams, 29 acres of clogged stream lands, a hazardous water body, one vertical opening and 5.5 acres of industrial/residential waste. This project was completed in August of 2004.

The second phase of the reclamation project was let for bid in early June of 2005. This phase addressed grading steep acidic spoil piles and highwalls and a dangerous water impoundment. A new dam was constructed to retain water in the pond which helps control and filter surface run-off into Roberts Creek. Storm water run-off from the site flows to an Army Corp of Engineers regulated wetland. In this area a system of filters protects the wetland. Reclamation construction of the second phase was completed in October 2006.

The third and final reclamation phase addressing the northern portion of the site began in October 2006, and ended in June of 2007. The project eliminated dangerous highwalls, clogged stream land, and industrial/residential waste. All acid-forming materials were limed and then covered with nine inches of neutral, clay cover material. The site was reclaimed to pasture land and wildlife habitat. The Mitchell Project successfully eliminated the mine site's acidic

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sediment contribution to Roberts Creek Reservoir. Due to heavy spring rains, minor seeding repairs are anticipated for the fall of 2007.

### **Roozeboom # 2 Reclamation Project**



Spring 2007 Construction

The Roozeboom #2 AML Reclamation Project is located in Mahaska County. The site is across a county road from the Roozeboom (#1) AML/WCAP site. This site is approximately 25 acres and reclamation will eliminate clogged stream land, clogged stream, hazardous water body, and dangerous highwall features. Reclamation was approximately 50% complete at the end of June 2007. Riprap placement, terrace construction, and seeding activities are the items remaining to be completed.

### **Watershed Cooperative Agreement Program Sites**

Reclamation on two previously approved Watershed Cooperative Agreement Program Grant AML/Acid Mine Drainage (AMD) projects was completed during the evaluation year.

The first project is the Red Rock Environmental Education Foundation (RREEF) AML/AMD Reclamation Project. A WCAP grant was awarded in 2006 for the amount of \$75,000.00 to complete a \$108,350.00 project. There were also several in-kind services contributed by other partners.

This site included approximately eight acres of highly eroded soils. The acid spoil piles were contributing to degradation of the immediate area by killing vegetation, creating massive erosion gullies and damaging downstream habitat by transporting acid forming materials into Lake Red Rock. This lake is a large recreation area operated by the US Army Corps of Engineers near the town of Pella.

The RREEF Reclamation Project began in early 2006, with all grading work being completed by July 2006. The final permanent seeding activities were delayed in the fall of 2006 due to weather limitations. Temporary seeding was completed on the site in preparation for the coming winter. A permanent seeding contract was let for bid in the



Spring 2007 planting

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spring of 2007 for repairs and seeding activities on the site. The contractor mobilized in May 2007 and completed the necessary repairs and seeding activities before the end of the month.

The second WCAP project is the Roozeboom # 1 AML/AMD Project on which reclamation began in the summer of 2006. This project was funded through partnering with the Mahaska



Soil and Water Conservation District which contributed \$167,000.00, Pathfinders Resource Conservation & Development, Inc., which received a WCAP grant of \$100,000.00 and the Iowa Division of Soils Conservation. The estimated cost for the Roozeboom Project is approximately \$686,500.00. The first contract was completed in September 2006.

The Roozeboom #1 Site, pictured to the left before reclamation, is located near the town of Oskaloosa in Mahaska County. The site lies adjacent to the Little Muchakinock Creek and drainage empties directly into the Creek. The site is approximately 25 acres in size. It is located mostly on a gently sloping hillside

and consists primarily of clogged steam lands and a small section of clogged streams. The site has numerous large gullies that contain acid toxic materials that prevent vegetation from becoming established. Acid toxic sediment that has been transported from the site by erosion has degraded the nearby water flow channel. Vegetation does not exist in the water flow channel because of the toxic materials.

Two of the existing four ponds were backfilled in the grading process. A new larger 2 ½ acre pond and wetlands were created to mitigate the loss with equal water. Two of the existing ponds were enhanced. The wetlands and mitigation area were seeded above and below the waterline. Multiple wetlands were built to capture surface runoff and create seasonal pools that are used by local wildlife.

The vegetation cover consists of warm/cool season grass mixture. Trees were planted in selected areas. A vegetation inspection was completed in the spring 2007, resulting in the general contractor coming back to repair areas that did not meet required vegetation success.

Picture to the right is the two and one-half acre pond constructed during reclamation and vegetation of spring 2007 planting.



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The IDSC is continuing its work with various State, local, and Federal partnerships to expand its partnership activity. It is anticipated that two additional Watershed Cooperative Agreement project applications will be submitted in late FY 2007. This activity should continue in subsequent evaluation years.

### **Status of Current AML Program**

Enhancement and Performance reviews conducted in previous years as well as this year's review have found that Iowa's AML Program is run in an effective and cost efficient manner. The projects are completed with minimal disturbance to the environment and they include any necessary mitigation measures for the protection or enhancement of wetlands. Construction monitoring, post-construction monitoring, and maintenance processes ensure projects meet contract specifications, project objectives, and program goals. A bar chart entitled Iowa Anticipated AML Project Completion Schedule is located in Appendix B. This chart illustrates the AML reclamation work planned and accomplished. Iowa's AML projects result in elimination of hazards to the public and restoration of beneficial land uses.

## **V. Success in Achieving the Purposes of SMCRA**

Individual topic reports that provide details on how the following evaluations and measurements were conducted are available at Alton Field Division, MCR Office, 501 Belle Street, Alton, Illinois 62002.

### **A. Off-site Impacts**

No new off-site impacts occurred in Iowa during EY 2007 and all existing off-site impacts were identified prior to EY 2002.

On June 30, 2007, there were 12 remaining bond forfeiture sites on the IDSC inspectable units list. Eight IU's are yet to be reclaimed and four IU's are in the one year required maintenance period. Five of these IU's contained seven hydrologic off-site impacts affecting both land and water resources. Of the 12 remaining inspectable units, seven IU's, or 58%, are free from off-site impacts. The number of off-site impacts will be reduced as bond forfeiture reclamation is completed.

During EY 2007, American Coal Corporation Mine # 6 was reclaimed, removing one minor off-site impact. Star Coal Company Mine # 12 was also reclaimed, removing a minor off-site impact. Both of these off-site impacts were hydrologic in nature and affected both land and water resources.

As the bond forfeiture mine sites are reclaimed per the State's Reclamation Plan Schedule, all off-site impacts should be eliminated by the end of calendar year 2008.

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## **B. Reclamation Success**

Directive REG-8, revised December 21, 2006, noted for Reclamation Success that, “Success will be determined based on the number of acres that meet the bond release standards and have been released by the State.” Successful reclamation includes achievement of approximate original contour, re-establishment of land capability, restoring hydrologic balance, and contemporaneous reclamation. For the IDSC, reclamation success is determined by the reclamation of the bond forfeiture coal mine sites.

### Bond Forfeiture Reclamation

With the start of EY 2007 there were 16 inspectable units in Iowa. During EY 2007, the one year maintenance period expired for four mine sites reclaimed during the previous EY. The on the ground reclamation activities outlined in the July 2006, “Iowa Bond Forfeiture Reclamation Schedule” identified seven bond forfeiture mine sites to be under construction during EY 2007. During EY 2007, four bond forfeiture mine sites were reclaimed per the reclamation schedule or ahead of schedule and are presently under the required one year maintenance period which expires at the end of December 2007. At that time they can be removed from the IU list. These reclaimed mine sites include:

- American Coal Company Mine # 6
- Star Coal Company Mine # 7
- Star Coal Company Mine # 1
- Jude Coal Company Mine # 3

Three sites were not completed as scheduled. These three sites all relate to properties controlled by one private individual and complications developed at all three sites which resulted in reclamation delays, forcing the IDSC to modify its bond forfeiture reclamation schedule. These properties are:

- American Coal Wash Plant #1
- Iowa Coal Mining Company Wash Plant #1
- Star Mine # 10.

American Coal Wash Plant #1 was let for bid during the evaluation year. However, the bid was rejected by the IDSC and this reclamation project is scheduled to be re-bid in EY 2008. On Iowa Coal Mining Company Wash Plant #1, the property owner has had several legal issues with the County on back taxes that have not been resolved. This issue will be resolved in the future. The landowner is currently having those items that are salvageable removed from the site. For the third site, the Iowa Division of Natural Resources purchased the Star # 10 bond forfeiture property. They are currently working with the IDSC on a design plan for the site. Negotiations between the two State agencies regarding the reclamation plans for the mine site have delayed on-the-ground reclamation. This site will also be bid in EY 2008.

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The American Coal Company Mine #1 A and the Superior Coal Mine # 1 are under a reclamation contract and as noted above the American Coal Wash Plant # 1 will be re-bid.

The reclamation of five bond forfeiture coal mine sites is pending and a reclamation schedule has been developed. Reclamation activities at these sites are identified in the "Iowa Bond Forfeiture Reclamation Schedule" of May 2007 and are included in the approved EY 2008 Performance Agreement. These bond forfeiture coal mine sites are:

- Iowa Coal Mining Company # 1 Wash Plant
- Iowa Coal Mining Company Mine # 8
- Star Coal Company Mine #10
- Star Coal Company Mine # 14
- Superior Coal Company Mine # 2A

## **VI. OSM Assistance**

The primary mode of OSM assistance to IDSC is through grant funding. For the operation of the IDSC Regulatory Program, a grant was awarded in the amount of \$125,378.00. This grant covered the period of July 1, 2006, through June 30, 2007. OSM provided approximately 50% of the total funding necessary for Regulatory Program operation.

OSM provides 100% funding for the Abandoned Mine Land Program in Iowa. For the period of July 1, 2006, through June 30, 2009, a grant was awarded to IDSC in the amount of \$1,681,634.00. The following is a breakdown of the IDSC AML grant funds.

Administrative	\$ 219,029.00
Project	\$ 1,280,971.00
Emergency Administration	\$ 10,000.00
Emergency Projects	\$ 50,000.00
ACSI	<u>\$ 121,635.00</u>
Total	\$ 1,681,634.00

OSM also provides direct technical assistance to Iowa in all aspects of the Technical Innovation and Professional Services (TIPS), including installations, upgrades, updates, and patches of computer software programs, electronic permitting initiatives, Geographic Information System, Global Positioning System, and other spatial data technologies. OSM is also available to provide support for State symposia/conferences, topical seminars, workshops, interactive forums, specialized onsite training, and technology outreach programs.

During EY 2007, the following technical assistance was provided by OSM MCR to Iowa:

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## Title V Assistance

- **American Coal Company No. 1A Bond Forfeiture Design**

Final designs were sent to Iowa on February 2, 2006. The State provided additional comments on the designs to the MCR Program Support Division (PSD) at the end of May 2006. PSD conducted a site visit and met with the landowner on July 18, 2006. The revised final designs were provided to Iowa in October 2006. This project was let for bid in January 2007.

- **American Coal Company Wash Plant No. 1**

PSD continues to assist Iowa with bond forfeiture reclamation design. A preliminary project proposal and cost estimate was delivered to the State in October 2005. The site was substantially under-bonded for full reclamation and the State is investigating other sources of funds. The State contacted PSD at the end of May 2006, to discuss a final design. PSD conducted a site visit on July 18, 2006, to collect additional design data. Final designs were sent to Iowa on December 13, 2006. Iowa is currently looking at possible modifications of the designs to include a wetland and Coal Combustion By Products application.

## Title IV Assistance

- **Herbert Passive Treatment System**

PSD is providing technical assistance to the IDSC AML Program on passive treatment technology. In August 2006, a geotech firm conducted borings at the Herbert AML site for pre-construction data. PSD staff traveled to Iowa during the week of August 7, 2006, and assisted IDSC personnel in a hydrologic investigation at the site in preparation for the design of a remediation system for the acid discharge. PSD staff collected water samples during this time and analyzed field parameters while on site. The water data was then modeled through AMDTreat (TIPS software). Initial wetland dimensions, construction information and associated costs were forwarded to the IDSC for review on November 8, 2006, and a preliminary design was sent to the IDSC on November 16, 2006. A site visit was made on January 10-12, 2007, to conduct additional water sampling with IDSC staff. On January 18, 2007, PSD provided comments on IDSC's suggested design revisions.

## Other Assistance

- **Managing Mine Map Cooperative Agreements**

MCR PSD is administering a Mine Map Cooperative Agreement funded to IDSC with OSM applied science monies. This project allows for the scanning, geo-

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referencing and computer preservation of historic mine maps.

## **VII. General Oversight Topic Reviews**

The following oversight topics were reviewed during EY 2007. The detailed finding reports are available for review at the Alton Field Division of the Mid Continent Region Office located at 501 Belle Street, Alton, IL 62002.

### **AML Post-Construction Project Success**

The AFD conducted an Enhancement and Performance Review of eight post-construction AML reclamation projects. This review took place between November 2006, and April 2007. The eight AML projects included the following projects: East Maryville, Jones, King, McVay, Mitchell, Pearl, Roozeboom and RREEF.

Based on the oversight evaluation, it was determined that the end results of AML reclamation is a success. The stability and long-term success of the sites were evident. Design goals were met and the reclamation was done in a cost-effective manner. The review confirmed that the IDSC continues to implement procedures to comply with the environmental commitments and stipulations requested by the reviewing agencies.

### **Abandoned Mine Land Inventory System Certification Data Accuracy**

An evaluation was conducted during EY 2007 at the IDSC offices ensuring the accuracy of data entered into AMLIS. The process of ensuring data accuracy in the AMLIS was determined by the AFD (1) “walking through” the certified procedures with the Iowa AML staff, (2) reviewing eight PAD’s obtained from the Windows-NF version of AMLIS using Citrix with the hard copy of the PAD, and (3) selecting all new PAD’s in AMLIS since the 2006 AMLIS review and comparing the State’s hard/paper copy of the PAD with the printed PAD’s from AMLIS.

The review found that the Iowa AML Program’s process in ensuring data accuracy into AMLIS is successful. Moreover, the “Certification Procedures” identified in the Director’s letter of June 21, 2004, are still being appropriately implemented.

### **Implementation of Commitments made in AML Project NEPA Documents**

OSM has responsibility to ensure that project construction using AML grant funds is in compliance with NEPA. If project activities affect environmental resources identified in the environmental document, special procedures or mitigation measures must be taken. The State commits to implementing these procedures as a condition of project approval.

This evaluation relates to the principle established in OSM Directive AML-22. This directive requires Program States to have an approved reclamation plan which meets the requirements of Federal laws and regulations and conducts reclamation in accordance

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with this plan. The IDSC has an approved plan and an active construction program. In EY 2007, the OSM AFD selected a representative sample of Iowa AML projects to inspect following construction to confirm implementation of any commitments or stipulations made in the environmental document.

This evaluation confirmed that the IDSC is implementing all commitments and stipulations in project environmental documents resulting from the NEPA review process. The conclusion drawn from this evaluation is that Iowa is effectively implementing its cooperative responsibilities with the AFD under NEPA.

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## **Appendix A: Title V Iowa Bond Forfeiture Reclamation**

### **Schedule**

On the table on the following page:

Successful reclamation was also completed on four bond forfeiture mine sites. These sites include the American Coal Mine # 6, Star Coal Company Mines # 7 and # 12 and Jude Coal Company Mine # 3. These four mine sites are in the required one year maintenance process. As the time frames are completed, these sites will also be removed from the inspectable unit list.

		2005			2006			2007			2008		
<b>American WP #1</b> OSM Design	PLANNED				Design	Design	Design	Design	Design	Design			
	ACTUAL												
<b>Star 12</b> DSC Design	PLANNED				Design	Bid Process	Construction	Construction	Construction	Construction			
	ACTUAL				Actual Design	Actual Design	Actual Design						
<b>Superior 2A</b> DSC Design	PLANNED	Design	Bid Process	Construction	Construction	Construction	Construction	Liability	Liability	Liability			
	ACTUAL				Actual Design	Actual Design	Actual Design						
<b>ICMC WP #1</b> Design by Service Contract	PLANNED				Design	Design	Design	Bid Process	Construction	Construction	Liability	Liability	
	ACTUAL							Actual Design	Actual Design	Actual Design			
<b>Star 10</b> OSM Design	PLANNED	Design	Bid Process	Construction	Construction	Construction	Construction	Liability	Liability	Liability			
	ACTUAL				Actual Design	Actual Design	Actual Design						
<b>American 6</b> DSC Design	PLANNED				Design	Bid Process	Construction	Construction	Construction	Construction			
	ACTUAL				Actual Design	Actual Design	Actual Design	Actual Design	Actual Design	Actual Design			
<b>Superior 1</b> OSM Design	PLANNED				Design	Bid Process	Construction	Construction	Construction	Construction			
	ACTUAL				Actual Design	Actual Design	Actual Design						
<b>Star 7</b> DSC Design	PLANNED				Design	Bid Process	Construction	Construction	Construction	Construction			
	ACTUAL				Actual Design	Actual Design	Actual Design						
<b>American 1A</b> OSM Design	PLANNED				Design	Bid Process	Construction	Construction	Construction	Construction			
	ACTUAL												
<b>ICMC 8</b> DSC Design	PLANNED							Design	Bid Process	Construction	Construction	Liability	
	ACTUAL												
<b>Star 14</b> DSC Design	PLANNED							Design	Bid Process	Construction	Construction	Liability	
	ACTUAL												
<b>Jude 3</b> DSC Design	PLANNED							Design	Bid Process	Construction	Construction	Liability	
	ACTUAL							Actual Design	Actual Design	Actual Design	Actual Design	Actual Design	
<b>American 5</b>	PLANNED				Liability	Liability	Liability						
	ACTUAL				Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.						
<b>American 3</b>	PLANNED				Liability	Liability	Liability						
	ACTUAL				Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.						
<b>Star #6</b>	PLANNED				Liability	Liability	Liability	Liability	Liability	Liability			
	ACTUAL				Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.			
<b>Star #11</b>	PLANNED				Liability	Liability	Liability						
	ACTUAL				Actual Liab. PD.	Actual Liab. PD.	Actual Liab. PD.						

Design
Bid Process
Construction
Liability

Actual Design
Actual Const.
Actual Liab. PD.

# **Appendix B: Anticipated Title IV AML Project Completion Schedule**

The table on the following page represents the anticipated schedule of AML projects.

AML Project Information				2007				2008			
Problem Area	Number	Priority		1	2	3	4	1	2	3	4
Blom	IA-067	2	Design Construction								
Bert	IA-098	2	Design Construction								
Larson	IA-186	2	Design Construction								
Long	IA-151	1	Design Construction								
Waal West	IA-195	2	Design Construction								
Westercamp	IA-070	2	Design Construction								
Boender	IA-056	1	Design Construction								
McLandsborough	IA-042	1	Design Construction								
Herbert	IA-214	2	Design Construction								
Goff	IA-128	2	Design Construction								
Blizzard	IA-057	2	Design Construction								
Janssen	IA-059	2	Design Construction								
Lewis	IA-062	1	Design Construction								
Greenfield	IA-108	1	Design Construction								
Roudybush East	IA-148	1	Design Construction								

## Appendix C:

These tables present data pertinent to mining operations and State and Federal regulatory activities within Iowa. They also summarize funding provided by OSM and Iowa staffing. Unless otherwise specified, the reporting period for the data contained in all tables is the same as the evaluation year. Additional data used by OSM in its evaluation of Iowa's performance is available for review in the evaluation files maintained by the Alton Field Division Office.

TABLE 1 – Coal Production.....	T-1
TABLE 2 – Inspectable Units .....	T-2
TABLE 3 – State Permitting Activity .....	T-3
TABLE 4 – Off-site Impacts (Active and Bond Forfeiture Sites) .....	T-4
TABLE 5 – Annual State Mining and Reclamation Results .....	T-5
TABLE 6 – State Bond Forfeiture Activity .....	T-6
TABLE 7 – State Staffing.....	T-7
TABLE 8 – Funds Granted to Iowa by OSM .....	T-8
TABLE 9- State Inspection Activity .....	T-9
TABLE 10 – State Enforcement Activity .....	T-10
TABLE 11– Lands Unsuitable Activity (During Current Evaluation Year).....	T-11
TABLE 12 – Post Mining Land Use Acreage (optional table not completed).....	T-12

TABLE 1			
Coal Produced for Sale, Transfer, or Use (Millions of Short Tons)			
Period	Surface Mines	Underground Mines	Total
Coal production <sup>A</sup> for entire State:			
Evaluation Year			
EY 2005	0.000	0.000	0.000
EY 2006	0.000	0.000	0.000
EY 2007	0.000	0.000	0.000
<sup>A</sup> Coal production as reported in this table is the gross tonnage which includes coal that is sold, used, or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production. Provide production information for the latest three full evaluation years to include the last full evaluation year for which data is available.			

TABLE 2

Inspectable Units  
As of June 30, 2007

Coal mines and related facilities	Number and Status of Permits								Nbr. of Insp. Units <sup>A</sup>	Permitted Acreage <sup>B</sup> (100's of acres)					
	Active or temporarily inactive		Inactive Phase II bond release		Abandoned		Totals			Federal Lands		State/Private Lands		All Lands	
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	IP	PP	Total	
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	IP	PP	Total	
<b>LANDS FOR WHICH THE STATE IS THE REGULATORY AUTHORITY</b>															
Surface mines	0	0	0	0	0	8	0	8	8	0.0	0.0	0.0	15.9	15.9	
Underground mines	0	0	0	0	0	2	0	2	2	0.0	0.0	0.0	5.4	5.4	
Other facilities	0	0	0	0	0	2	0	2	2	0.0	0.0	0.0	1.3	1.3	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>12</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>22.6</b>	<b>22.6</b>	
Total number of permits:										12					
Average number of permits per inspectable unit (excluding exploration sites):										1.00					
Average number of acres per inspectable unit (excluding exploration sites):										188.33					
Number of exploration permits on State and private lands:										0		On Federal lands <sup>C</sup> :		0	
Number of exploration notices on State and private lands:										0		On Federal lands <sup>C</sup> :		0	
<p>IP: Initial regulatory program sites PP: Permanent regulatory program sites</p> <p><sup>A</sup> Inspectable units include multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.</p> <p><sup>B</sup> When a single inspectable unit contains both Federal lands and State/Private lands, enter the permitted acreage for each land type in the appropriate category.</p> <p><sup>C</sup> Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management.</p>															



**TABLE 3**

**State Permitting Activity  
As of June 30, 2007**

Type of Application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres <sup>A</sup>	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New Permits	0	0	0	0	0	0	0	0	0	0	0	0
Renewals	0	0		0	0		0	0		0	0	
Transfers, sales, and assignments of permit rights	0	0		0	0		0	0		0	0	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										0	0	
Exploration notices <sup>B</sup>											0	
Revisions (exclusive of incidental boundary revisions)		0			0			0			0	
Revisions (adding acreage but are not incidental boundary revisions)	0	0	0	0	0	0	0	0	0	0	0	0
Incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions: 0

<sup>A</sup> Includes only the number of acres of proposed surface disturbance.

<sup>B</sup> State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

**TABLE 4**

**OFF-SITE IMPACTS (excluding bond forfeiture sites)**

RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
	Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0

Total number of inspectable units (excluding bond forfeiture sites): 0  
 Inspectable units free of off-site impacts: 0  
 Inspectable units with off-site impacts: 0

**OFF-SITE IMPACTS ON BOND FORFEITURE SITES**

RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	7	0	0	2	5	0	2	5	0	0	0	0
	Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0
	Total	7	0	0	2	5	0	2	5	0	0	0	0

Total number of inspectable units (only bond forfeiture sites): 12  
 Inspectable units free of off-site impacts: 7  
 Inspectable units with off-site impacts: 5

<b>TABLE 5</b>				
<b>Annual State Mining and Reclamation Results</b>				
Bond release phase	Applicable performance standard	During this Evaluation Year		
		Total acreage released	Acreage also released under Phase I	Acreage also released under Phase II
A	B	C	D	E
Phase I	- Approximate original contour restored - Topsoil or approved alternative replaced	0		
Phase II	- Surface stability - Establishment of vegetation	0	0	
Phase III	- Post-mining land use/productivity restored - Successful permanent vegetation - Groundwater recharge, quality and quantity restored - Surface water quality and quantity restored	0	0	0
<b>Bonded Acreage<sup>A</sup></b>		<b>Acres during this evaluation year</b>		
Total number of new acres bonded during this evaluation year		0		
Number of acres bonded during this evaluation year that are considered remaining, if available		0		
Number of acres where bond was forfeited during this evaluation year		0		
<b>Bonded Acreage Status</b>		<b>Cumulative Acres</b>		
Total number of acres bonded as of the end of last review period (June 30, 2006) <sup>B</sup>		0		
Total number of acres bonded as of the end of this review period (June 30, 2007) <sup>B</sup>		0		
Sum of acres bonded that are between Phase I bond release and Phase II bond release as of June 30, 2007 <sup>B</sup>		0		
Sum of acres bonded that are between Phase II bond release and Phase III bond release as of June 30, 2007 <sup>B</sup>		0		
<b>Disturbed Acreage</b>		<b>Acres</b>		
Number of Acres Disturbed during this evaluation year		0		
Number of Acres Disturbed at the end of the evaluation year (cumulative)		0		
<sup>A</sup> Bonded acreage is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations. <sup>B</sup> Bonded acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).				

Brief explanation of columns D & E. The States will enter the total acreage under each of the three phases (column C). The additional columns (D & E & E) will "break-out" the acreage among Phase II and/or Phase III. Bond release under Phase II can be a combination of Phase I and II acreage, and Phase III acreage can be a combination of Phase I, II, and III. See "Instructions for Completion of Specific Tables," Table 5 for example.

**TABLE 6**

**State Bond Forfeiture Activity**  
(Permanent Program Permits)

Bond Forfeiture Reclamation Activity by SRA	Number of Sites	Dollars	Acres
Sites with bonds forfeited and collected that were unreclaimed as of June 30, 2006 (end of previous evaluation year) <sup>A</sup>	12		2,259
Sites with bonds forfeited and collected during Evaluation Year 2007 (current evaluation year)	0	\$ 0	0
Sites with bonds forfeited and collected that were re-permitted during Evaluation Year 2007 (current evaluation year)	0		0
Sites with bonds forfeited and collected that were reclaimed during Evaluation Year 2007 (current evaluation year)	4		457
Sites with bonds forfeited and collected that were unreclaimed as of June 30, 2007 (end of current evaluation year) <sup>A</sup>	8		1,802
Sites with bonds forfeited but uncollected as of June 30, 2007 (end of current evaluation year)	0		0
<b>Surety/Other Reclamation (In Lieu of Forfeiture)</b>			
Sites being reclaimed by surety/other party as of June 30, 2006 (end of previous evaluation year) <sup>B</sup>	0		0
Sites where surety/other party agreed to do reclamation during Evaluation Year 2007 (current evaluation year)	0		0
Sites being reclaimed by surety/other party that were re-permitted during Evaluation Year 2007 (current evaluation year)	0		0
Sites with reclamation completed by surety/other party during Evaluation Year 2007 (current evaluation year) <sup>C</sup>	0		0
Sites being reclaimed by surety/other party as of June 30, 2007 (current evaluation year) <sup>B</sup>	0		0
<sup>A</sup> Includes data only for those forfeiture sites not fully reclaimed as of this date			
<sup>B</sup> Includes all sites where surety or other party has agreed to complete reclamation and site is not fully reclaimed as of this date			
<sup>C</sup> This number also is reported in Table 5 as Phase III bond release has been granted on these sites			

<b>TABLE 7</b>	
<b>State Staffing</b> (Full-time equivalents at end of evaluation year)	
Function	EY 2007
Regulatory Program	
Permit Review	1.25
Inspection	0.75
Other (administrative, fiscal, personnel, etc.)	0.60
Regulatory Program Total	2.60
AML Program Total	4.10
<b>Total</b>	<b>6.70</b>

**TABLE 8**

**Funds Granted To Iowa  
BY OSM**  
(During the Current Evaluation Year)  
**(Actual Dollars, Rounded to the Nearest Dollar)**

Type of Funding	Federal Funds Awarded During Current Evaluation Year	Federal Funding as a Percentage of Total Program Costs
Regulatory Funding		
Administration and Enforcement Grant	\$ 129,130	50.00 %
Other Regulatory Funding, if applicable	\$ 0	0.00 %
<b>Subtotal</b>	<b>\$ 129,130</b>	
Small Operator Assistance Program	\$ 0	100 %
Abandoned Mine Land Reclamation Funding <sup>A</sup>	\$ 1,681,982	100 %
<b>Totals</b>	<b>\$ 1,811,112</b>	

<sup>A</sup> Includes funding for AML Grants, the Clean Streams Initiative and the Watershed Cooperative Agreement Program.

**TABLE 9**

**State Inspection Activity  
 During Current Evaluation Year**

Inspectable Unit Status	Number of Inspections Conducted	
	Complete	Partial
Active <sup>A</sup>	0	0
Inactive <sup>A</sup>	0	0
Abandoned <sup>A</sup>	14	0
<b>Total</b>	<b>14</b>	<b>0</b>
Exploration	0	0

<sup>A</sup> Use terms as defined by the approved State program.

<b>TABLE 10</b>		
<b>State Enforcement Activity</b>		
<b>During Current Evaluation Year</b>		
<b>Type of Enforcement Action</b>	<b>Number of Actions<sup>A</sup></b>	<b>Number of Violations<sup>A</sup></b>
Notice of Violation	0	0
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0
<sup>A</sup> Do not include those violations that were vacated.		



<b>TABLE 11</b>		
<b>Lands Unsuitable Activity</b>		
<b>During Current Evaluation Year</b>		
	<b>Number</b>	<b>Acreage</b>
Number Petitions Received	0	
Number Petitions Accepted	0	
Number Petitions Rejected	0	
Number Decisions Declaring Lands Unsuitable	0	0
Number Decisions Denying Lands Unsuitable	0	0

<b>TABLE 12 Optional</b>	
<b>Post Mining Land Use Acreage (after Phase III bond release)</b>	
Land Use	Acreage Released during this Evaluation Year
Cropland	0
Pasture/Hayland	0
Grazing Land	0
Forest	0
Residential	0
Fish & Wildlife Habitat	0
Developed Water Resources	0
Public Utilities	0
Industrial/Commercial	0
Recreation	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
Other (please specify):	0
<b>Total</b>	<b>0</b>

## Appendix D: State Comments on Report

**From:** Tow, Ken [mailto:Ken.Tow@idals.state.ia.us]  
**Sent:** Wednesday, August 15, 2007 4:04 PM  
**To:** Andrew Gilmore  
**Cc:** Coffelt, Todd; John Coleman  
**Subject:** RE: Annual report comments

Andy –

This is to confirm our telephone conversation earlier today that we accept the draft annual report as is and have no further comments to offer at this time.

Ken T.

**Kenneth Tow**

### **Disposition of Comments:**

No changes were required.