



DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER  
CORPS OF ENGINEERS  
550 MAIN STREET  
CINCINNATI, OH 45202

13 Jan 2013

CELRD-PDS-O

MEMORANDUM FOR Commander, U.S. Army Engineer District, Huntington, Attention [REDACTED]  
[REDACTED] (CELRH-EC-Q), Huntington District, Corps of Engineers, 502 Eighth Street,  
Huntington, WV 25701

SUBJECT: Review Plan for Monday Creek Ecosystem Restoration Project, Hocking River  
Basin, OH

1. The attached Review Plan (RP) for Monday Creek Ecosystem Restoration Project, Hocking River basin project was presented to the Great Lakes and Ohio River Division for approval in accordance with EC 1165-2-209 "Civil Works Review" dated 31 January 2010.
2. Extensive underground and surface mining was conducted within the Monday Creek Watershed from 1850 to 1958. This pre-law mining resulted in severe water quality degradation and surface instability. Additionally, reject material from coal mining partially blocks streams and contributes acid loading in the tributary streams. This coal mining has resulted in extremely low pH and high dissolved iron and aluminum. Restoration is needed to improve water quality on the main stem Monday Creek and the Hocking River and restore warm water fishery. The project is considered to be single purpose. An Environmental Assessment (EA) has been prepared and a finding of no significant impact has been signed. The Chief's Report was approved in 2006, and WRDA 2007 provided authorization for construction. A Value Engineering Study was conducted in September 2010. 90% draft plans and specifications were published in May 2011. The project consists of the design and construction of acid coal mine drainage subsidence, barrier entry, and source control features at 12 locations, lime dosers at 2 locations, and to construct acid coal mine drainage discharges treatment features (limestone leach beds) at 5 locations in Brush Fork and Lost Run subwatersheds, Hocking County, Ohio. Also to design and construction acid coal mine drainage wetland treatment features (wetland detention dikes and retained wetlands) at two locations in Perry County, Ohio.
3. The RP defines the scope and level of peer review for the activities to be performed for the subject project. The USACE LRD Review Management Organization (RMO) has reviewed the attached RP and concurs that it describes the scope of review for work phases and addresses all appropriate levels of review consistent with the requirements described in EC 1165-2-209.
4. I concur with the recommendations of the RMO and approve the enclosed RP for the Monday Creek Ecosystem Restoration project, Hocking River, OH.
5. The District is requested to post the RP to its website. Prior to posting, the names of all individuals identified in the RP should be removed.

6. If you have any questions or need additional information, please contact [REDACTED],  
CELRD-PDS-P, at [REDACTED]

[REDACTED]  
[REDACTED]  
Brigadier General, USA  
Commanding

2 Encls

1. Memo from [REDACTED] dated 4 January 2013
2. Review Plan



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
HUNTINGTON DISTRICT, CORPS OF ENGINEERS  
502 EIGHTH STREET  
HUNTINGTON, WV 25701

CELRH-EC

4 January 2013

MEMORANDUM FOR CELRD-PDS-H [REDACTED] GREAT LAKES & OHIO RIVER  
DIVISION, 550 MAIN STREET #10032, CINCINNATI OH 45202-3222

SUBJECT: Revised Review Plans for the Monday Creek Ecosystem Restoration Project

1. In Accordance with EC 1165-2-209, attached is the revised Review Plan for the Monday Creek Ecosystem Restoration Project for your approval. The review plan includes Agency Technical Review (ATR) outside of the District. Independent External Peer Review (IEPR) is not recommended since this project is an ecosystem restoration project that does not pose a significant threat to human life.

Comments received from LRD have been addressed, and the draft Review Plan has been revised accordingly.

2. Please direct any question or comments to [REDACTED] After your approval, the Review Plan will be posted to the CELRH Intranet.

Encl

[REDACTED] P.E.  
/ Chief, Engineering and Construction Division  
Huntington District Dam Safety Officer

CF:  
CELRH-EC-Q  
CELRH-PM-PP-P

**IMPLEMENTATION  
REVIEW PLAN**  
for  
**MONDAY CREEK ECOSYSTEM RESTORATION  
PROJECT**  
HOCKING RIVER  
Design and Construction Activities  
  
*Huntington District*

**MSC Approval Date:** *Pending*  
**Last Revision Date:** *None*



US Army Corps  
of Engineers

**REVIEW PLAN**

**MONDAY CREEK ECOSYSTEM RESTORATION PROJECT**  
*Design and Construction Activities*

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## 1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the design and construction activities of the Monday Creek Ecosystem Restoration Project.

### b. References

- (1) Engineer Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010
- (2) Engineer Regulation (ER) 1110-1-12, Quality Management, 31 July 2006
- (3) Monday Creek Ecosystem Restoration Project, Project Management Plan
- (4) Planning Manual ER 1105-2-100

c. **Requirements.** This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). It provides the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) decision, implementation, and operations and maintenance documents and work products. The EC outlines three levels of review: District Quality Control, Agency Technical Review, and Independent External Peer Review.

- (1) **District Quality Control (DQC).** DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, etc. It is managed in the home district. Quality checks may be performed by staff responsible for the work, such as supervisors, work leaders, team leaders, designated individuals from the senior staff, or other qualified personnel. However, they should not be performed by the same people who performed the original work, including managing/reviewing the work in the case of contracted efforts. Additionally, the PDT is responsible for a complete reading of any reports and accompanying appendices prepared by or for the PDT to assure the overall coherence and integrity of the report, technical appendices, and the recommendations before approval by the District Commander. The Major Subordinate Command (MSC)/District Quality Management Plans address the conduct and documentation of this fundamental level of review. DQC is not addressed further in this review plan.
- (2) **Agency Technical Review (ATR).** ATR is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of the project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel, preferably recognized subject matter experts with the appropriate technical expertise such as regional technical specialists (RTS), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.
- (3) **Independent External Peer Review (IEPR).** IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is

warranted. For clarity, IEPR is divided into two types, Type I is generally for decision documents and Type II is generally for implementation documents.

A Type II IEPR (SAR) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities. External panels will review the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed. The review shall be on a regular schedule sufficient to inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring that good science, sound engineering, and public health, safety, and welfare are the most important factors that determine a project's fate.

## 2. PROJECT INFORMATION

- a. **Project.** Extensive underground and surface mining was conducted within the Monday Creek Watershed from 1850 to 1958. This pre-law mining resulted in severe water quality degradation and surface instability. Additional reject material from coal mining partially blocks streams and contributes acid loading in the tributary streams. This coal mining has resulted in extremely low pH and high dissolved iron and aluminum. Restoration is needed to restore warm water fishery and to improve over all water quality on the main stem Monday Creek and the Hocking River. The project is considered to be single purpose. An Environmental Assessment (EA) has been prepared and a finding of no significant impact has been signed. The chief's report was approved in 2006 and WRDA 2007 provided authorization for construction. A Value Engineering Study was conducted in September 2010. 90% draft plans and specifications were published in May 2011.
- b. **General Site Location and Description.**

The project consists of the design and construction of acid coal mine drainage subsidence, barrier entry, and source control features at 12 locations, lime dosers at 2 locations, and to construct acid coal mine drainage discharges treatment features (limestone leach beds) at 5 locations in Brush Fork and Lost Run subwatersheds, Hocking County, Ohio. Also to design and construction acid coal mine drainage wetland treatment features (wetland detention dikes and retained wetlands) at two locations in Perry County, Ohio. The project, as authorized, required extensive data collection and studies and evaluations including historical records searches, field reconnaissance, surveys, preparation of mapping, hydrology, hydrologic, and water quality assessments, and geologic and geotechnical assessments. This data was utilized to design structures and systems to effect containment and/or treatment of mine spoil, acid mine drainage, and stabilization of mine subsidence features, sealing of mine openings and collapsed outcrop barriers, and the lining and armoring of tributary stream channels to prevent capture and diversion of surface water into abandon mine workings and to preclude the co-mingling of mine discharges with surface waters.
- c. **Factors Affecting the Scope and Level of Review.** Major construction features include:
  - 1) **Source control features at 12 locations to prevent acid coal mine drainage.** The District is proposing source control measures that once constructed would reduce the capture of fresh water runoff by abandoned coal mines. These measures generally consist of construction of over 25,000 linear feet of ephemeral and intermittent stream channels with impervious liners. These streams have been captured by underground mines subsidence, filled by spoil block and/or captured by open mine portals. Similar

completed projects by Ohio Division of Wildlife Division of Mineral Resource Management (ODNR- DMRM) and US Forest Service (USFS) in this watershed have show a significant reduction in down dip mine discharge with no significant maintenance.

- 2) **Passive acid coal mine drainage discharges treatment features (limestone leach beds) at 5 locations.** The District is proposing construction of limestone leach beds for passive treatment of acid mine drainage. These structures will be small ponds (less than 4 feet deep) that are fed from significant mine discharge points and are filled with graded limestone. These leach beds have control structures to adjust the water level in leach beds to effect treatment and avoid clogging by iron precipitant. Similar completed project by ODNR and USFS in this watershed and AML area have show a significant increase in pH and a reduction of iron with minimal maintenance.
  
- 3) **Lime Dosers at 2 locations. The District is proposing construction of two 75 ton lime dosers.** Based on the water sampling and analysis the level of treatment needed exceed the capacity of passive acid mine drainage treatments. The ODNR-DMRM has confirmed funding for the long term operation and maintenance of these dosers. During the VE study the comparison was made to evaluate construction of twelve lime stone leach beds and three slag leach beads and one doser verses construction two dosers, five limestone leach beads and no slag leach beds. The life cycle cost savings was significant to the customer and they endorsed the change. The ODNR-DMRM has conducted a field test with a small portable doser to verify the location and effectiveness of these treatments. These results have been used in the development of the 90% plans and specifications. The ODNR- DMRM is currently operating and maintaining two dosers in the Monday Creek watershed
  
- 4) **Wetland treatment features (wetland detention dikes and retained wetlands)** The District is proposing construction of three wetlands for the treatment of acid mine drainage. In Dixie Hollow two wetland dikes and in Rock Run one wetland dike is proposed to enhance existing wetlands. The Rock Run site is designed to be a downstream polishing feature to provide additional treatment from both ODNR-DMRM and USFS completed projects. Similar wetlands have been constructed by USACE, ODNR-DMRM and USFS for AMD treatment.
  
- 5) **Summary** The District is recommending construction of Abandon Mine Land (AML) and Acid Mine Drainage (AMD) treatments that are well established in the literature, field of restoration and reclamation, and current regulation on mining and have a proven recorded of performance. These design requirements developed by PDT of District staff and staff from WVU and ODNR-DMRM, and Engineer Research and Development Center (ERDC) better define fluvial geomorphic changes within head cutting streams, adjacent mine subsidence features, adjacent gob pile slope failures and mine discharge points. The best available design technology and construction methods will be utilized such that the previously referenced project components are functionally effective and that operation and maintenance requirements, to meet long term projects goals, are minimized. Monitoring will be required to better assure these operational goals and to effect the timely implementation of adaptive management initiatives. The damage to the terrestrial and aquatic environment has all ready occurred and the goal of this project is to incrementally reverse these damages and restore stream functions.

- d. **Recommended Plan.** Major construction features of the recommended plan include:
- 1) **Over view.** This project is expected to be a three year construction project with two years of monitoring and adaptive management. However the plans and specification have been developed as one set. When funding is provided for construction the plans will be subdivided in to three phases.
  - 2) **Phase I.** In this first phase the District would construct the majority of source control features and likely one doser.
  - 3) **Phase II.** In the second phase the District would construct additional source control features, lime stone leach beds.
  - 4) **Phase III.** In the third phase the District would construct any remaining source control and limestone leach beds and the wetland dikes.
  - 5) **Phase VI.** In the monitoring and adaptive management phase the District would monitor and make treatment adjustments to ensure the projects are each functioning and the system of treatments is performing as expected. The District would develop detailed operation and maintenance manuals.
- e. **In-Kind Contributions.** The Non Federal Cost Share Sponsor for this project is the Ohio Division of Wildlife Division of Mineral Resource Management. During construction the ODNR DMRM will be providing the lands, easements, rights of way, relocations, and disposal areas (LERRDs), and technical services such as additional geotechnical borings, preconstruction habitat surveys and water sampling and testing.

### 3. RMO COORDINATION

The review management organization will be the Great Lakes & Ohio River Division (MSC).

### 4. DISTRICT QUALITY CONTRL (DQC)

DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, and Project Delivery Team (PDT) reviews throughout the life of the project. DQC efforts will include the necessary expertise to address compliance with published Corps policy.

### 5. AGENCY TECHNICAL REVIEW (ATR)

- a. **General.** ATR will be managed and performed outside of the Huntington District. EC 1165-2-209 requires the MSC to serve as the RMO for this project. The RMO will manage the ATR. There shall be appropriate coordination and processing through CoPs; relevant PCXs, and other relevant offices to ensure that a review team with appropriate independence and expertise is assembled and a cohesive and comprehensive review is accomplished. The ATR shall ensure that the product is consistent with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and the results in a reasonably clear manner for the public and decision makers. Members of the ATR team will be from outside the Huntington District. The ATR lead will be from outside the Great Lakes & Ohio River Division.
- b. **Products for Review.** The ATR team will be reviewing the Plans & Specifications.

- c. **Required ATR Team Expertise.** ATR teams will comprise senior USACE personnel (Regional Technical Specialists (RTS), etc.) and may be supplemented by outside experts as appropriate. The disciplines represented on the ATR team will reflect the significant disciplines involved in the planning, engineering, design, and construction effort. These disciplines include civil, water quality, geotechnical, hydraulics and hydrology, cost, operation and maintenance, and construction. To assure independence, the leader of the ATR team is Freddie Pinkard from CEMVK. A list of the ATR members and disciplines is provided in ATTACHMENT 1. The chief criterion for being a member of the ATR team is knowledge of the technical discipline and relevant experience.
- d. **Documentation of ATR.** DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:
  - 1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
  - 2) The basis for the concern – cite the appropriate law, ASA (CW)/USACE policy, guidance or procedure that has not been properly followed;
  - 3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
  - 4) The probable specific action needed to resolve the concern – identify the action(s) that must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist. The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical coordination, and lastly the agreed upon resolution. The ATR team will prepare a Review Report which includes a summary of each unresolved issue; each unresolved issue will be raised to the vertical team for resolution. Review Reports will be considered an integral part of the ATR documentation.

ATR may be certified when all ATR concerns are either resolved or referred to HQUSACE for resolution and the ATR documentation is complete. Certification of ATR should be completed, based on work reviewed to date, for the draft and final report. See ATTACHMENT 2.

## 6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

- a. **General.** In accordance with EC 1165-2-209 a Type II IEPR (SAR) shall be conducted on design and construction activities for hurricane and storm risk management and flood risk management projects, as well as other projects where potential hazards pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities.
- b. **Decision on Type II IEPR and Type I IEPR.** In accordance with EC 1165-2-209 a Type II IEPR (SAR) is not required for the following reasons:
  - 1) Project features, as discussed in Section 2 above, do not pose a significant threat to human life.

- 2) This project is undoing damage to the environment that has already occurred. A complete failure of this project, which is not probable, would likely result in a continuation of the baseline conditions.
- 3) This project does not include the major repair, rehabilitation, replacement, or modification of existing facilities nor is this a hurricane and storm risk management or flood risk management project.
- 4) The nature of this project does not include work in any existing underground mines, or construction of mine shafts, or tunnels.

The project consists of the design and construction of acid coal mine drainage subsidence, barrier entry, and source control features at 12 locations, lime dosers at 2 locations, and to construct acid coal mine drainage discharges treatment features (limestone leach beds) at 5 locations in Brush Fork and Lost Run subwatersheds, Hocking County, Ohio. Also to design and construct acid coal mine drainage wetland treatment features (wetland detention dikes and retained wetlands) at two locations in Perry County, Ohio. The project, as authorized, required extensive data collection and studies and evaluations including historical records searches, field reconnaissance, surveys, preparation of mapping, hydrology, hydrologic, and water quality assessments, and geologic and geotechnical assessments. This data was utilized to design structures and systems to effect containment and/or treatment of mine spoil, acid mine drainage, and stabilization of mine subsidence features, sealing of mine openings and collapsed outcrop barriers, and the lining and armoring of tributary stream channels to prevent capture and diversion of surface water into abandon mine workings and to preclude the co-mingling of mine discharges with surface waters.

## 7. REVIEW SCHEDULES AND COSTS

- a. **DQC Schedule and Cost.** The cost for DQC is included in the costs for PDT activities and is not broken out separately. DQC will occur seamlessly during and throughout P&S. Quality checks and reviews occur during the development process and are carried out as a routine management practice. Multiple PDT Reviews of the P&S were completed in 2009 through 2011. PDT Review of the 50%, 70%, and 90% is complete.
- b. **ATR Schedule and Cost.** The estimated cost for ATR was \$38,000 ATR occurred at the 90% stages in the P&S. The ATR team took part in a kick off conference call. The ATR team provided comments in DrChecks, the PDT has resolved all comments, and the ATR team leader has signed the statement of technical review on 7 March 2012 (see Appendix B).

ATR Milestones	
90% P&S Review	November 2011

## 8. PUBLIC PARTICIPATION

Since initiation of the Monday Creek Restoration Project in March 1996 public meetings have been conducted. Public meetings were conducted to inform the public of the proposed construction of the Monday Creek Ecosystem Project on 21 and 22 June 2004. The public review and comment on the Draft Ecosystem Restoration Project Final Feasibility Report and Environmental Assessment included April to May 2005. Close coordination with the Monday Creek Restoration Project (watershed origination), Ohio Division of Wildlife Division of Mineral Resource Management (ODNR- DMRM), US Forest Service

(USFS), US Fish and Wildlife Service (USFWS), Ohio Environmental Protection Agency (OEPA), and Office of Surface Mining (OSM) have continued and will continue throughout the project. District Staff has attended numerous public partnering meetings hosted by the Monday Creek Restoration Project.

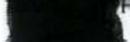
Additional public meetings will be conducted, as necessary, through the construction phase. Information will also be conveyed to the public through the use of press releases and media interviews as necessary and through the use of posting information to the Huntington District's web site. The project manager and or the lead engineer will also schedule office hours at the project site after construction is initiated. There is no formal public review for the plans and specifications and construction phases. However, the cost share partner, Ohio Division of Wildlife Division of Mineral Resource Management, has and will continue to have opportunities to review the plans and specifications and construction phases as part of the PDT. Upon MSC approval of this Review Plan, the Review Plan will be posted on the Huntington District Internet for Public Review ([http://www.lrh.usace.army.mil/approved\\_review\\_plans\\_rps](http://www.lrh.usace.army.mil/approved_review_plans_rps)).

## **9. MSC APPROVAL**

The Great Lakes and Ohio River Division is responsible for approving the review plan. Approval is provided by the MSC Commander. The commander's approval should reflect vertical team input (involving district, MSC, and HQUSACE members) as to the appropriate scope and level of review for the project. Like the PMP, the review plan is a living document and may change as the study progresses. Changes to the review plan should be approved by following the process used for initially approving the plan. In all cases the MSCs will review the decision on the level of review and any changes made in updates to the project.

## **10. REVIEW PLAN POINTS OF CONTACT**

Questions and/or comments on this review plan can be directed to the following points of contact:

-  Huntington District Project Manager
-  Huntington District Lead Engineer
-  Huntington District Chief, Quality Management

**ATTACHMENT 1: TEAM ROSTERS**

Functional Area	Name	Office
Project Manager	[REDACTED]	CELRH
Lead Engineer / Civil	[REDACTED]	CELRH
Structural	[REDACTED]	CELRH
Real Estate	[REDACTED]	CELRH
Contracting	[REDACTED]	CELRH
Geology	[REDACTED]	CELRH
Plan Formulation	[REDACTED]	CELRH
Cost Engineering	[REDACTED]	CELRH
Hydrology and Hydraulics	[REDACTED]	CELRH
Civil Site	[REDACTED]	CELRH
Geotechnical	[REDACTED]	CELRH
Geotechnical	[REDACTED]	CELRH
Specifications	[REDACTED]	CELRH
Construction	[REDACTED]	CELRH
Environmental	[REDACTED]	CELRH
Environmental	[REDACTED]	CELRH
HTRW	[REDACTED]	CELRH

NAME	DISCIPLINE	OFFICE
[REDACTED]	Civil/ Hydrology & Hydraulics	CEMVK
[REDACTED]	Water Quality (AMD treatment)/ Geotechnical	USDA/NRCS
[REDACTED]	O&M / Environmental	ODNR DMRM
[REDACTED]	Construction	CEMVN-CD
[REDACTED]	Environmental	CELRN
[REDACTED]	Cost	CE
[REDACTED]	Cost Engineering CX	CENWW-EC-X

**Vertical Team**

The Vertical Team consists of members of the HQUSACE and Great Lakes & Ohio River Division Offices. The Vertical Team plays a key role in facilitating execution of the project in accordance with the PMP. The Vertical Team is responsible for providing the PDT with Issue Resolution support and guidance as required. The Vertical Team will remain engaged seamlessly throughout the project via telecons as required and will attend In Progress Reviews and other key decision briefings as required. The District Liaison Robert Iseli, CELRD-PDS-H, is the District PM's primary Point of Contact on the Vertical Team.

ATTACHMENT 2: ATR CERTIFICATION TEMPLATE

STATEMENT OF TECHNICAL REVIEW

Monday Creek Ecosystem Restoration Project  
Plans and Specifications  
{date}

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for {type of project or project feature} for the Monday Creek Restoration Project in Perry and Hocking County, Ohio. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks<sup>sm</sup>.

\_\_\_\_\_, CEMVK-EC-MMC-HR  
ATR Team Leader

\_\_\_\_\_  
Date

\_\_\_\_\_, CELRH- PM-PP-P  
Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_, P.E., CELRD BTD  
Review Management Office Representative

\_\_\_\_\_  
Date

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

\_\_\_\_\_  
P.E.  
Chief, Engineering and Construction Division

\_\_\_\_\_  
Date

**Appendix B**  
**STATEMENT OF TECHNICAL REVIEW**

Monday Creek Ecosystem Restoration Project  
Plans and Specifications  
7 March 2012

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for 90% Plans and Specifications for the Monday Creek Restoration Project in Perry and Hocking County, Ohio. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks<sup>sm</sup>.

  
 CEMVK-EC-MMC-HR  
ATR Team Leader

7 March 2012  
Date

  
 CELRH-PM-PP-P  
Project Manager

8 March 2012  
Date

  
  
 P. E. CELRD LTD  
Review Management Office Representative

\_\_\_\_\_  
Date

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

  
\_\_\_\_\_  
D. P.E.

Chief, Engineering and Construction Division

3/13/12.  
Date