Condition Assessment Manual

Leakage and Releases Inspection Form and Checklist

Revision 1.0, 12/20/2011

Prepared by

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U.S. DEPARTMENT OF ENERGY
under contract DE-AC05-00OR22725

Leakage and Releases - Inspection Form

General Information:

Date of Site Visit: _____

Number of Spillways: _____ Spillway[s] Inspected: _____

Number of Sluiceways: _____ Sluiceway[s] Inspected: _____

Previous Inspection Issues or Repairs: _____
_____
_____

Description of Current Flow Measurement and Gate Calibration Techniques: _____
_____
_____

Estimated Loss Due to Seepage or Leakage [%]: _____

Previous History of Seepage or Leakage: _____
_____
_____

Minimum Downstream Flow Requirements [ft^3/sec]: _____ (Average)

Actual Release Discharge [ft^3/sec]: _____ (Average)

Additional Observations or Considerations: _____
_____
_____
_____

Spillways:

_____
_____
_____
_____

Sluiceways:

_____
_____
_____

Dam Abutments:

_____
_____
_____
_____

Gate and Seals:

_____
_____
_____
_____

Leakage:

_____
_____
_____
_____

Releases:

_____
_____
_____
_____

Leakage and Releases Check List				
Topic	**Yes**	**No**	**N/A**	**Comments/Details**
A. General Information				
What are the plant specific life and serviceability needs for spillways and sluiceways? *[How long will the spillways and sluiceways be required (i.e. are there future plans for plant decommissioning or major upgrade)?]*				
Have all accessibility issue been addressed and discussed with plant personnel prior to site visit? *[Determine which parts/items will require access for visual inspection, which parts/items will not be accessible, and alternative means of collecting date (previous records, interviews with plant personnel, etc.)]*				
Will any testing be permitted during the site visit? If yes, what testing techniques will be used and is any special equipment required? *[Will depend on accessibility, plant requirements, safety restrictions, etc.]*				
Have all plant records regarding spillway and sluiceway maintenance, repairs, operating conditions, performance data, etc. been gathered or requested?				

Leakage and Releases Check List - Continued				
Topic	**Yes**	**No**	**N/A**	**Comments/Details**
B. Leakage - Spillways and Sluiceways				
Is there visible leakage occurring at spillway and sluiceway gates when closed? *[If sluiceways are not visible, then leakage can be observed at their outlets.]*				
Is there evidence of gate seal deterioration? *[Look for excessive leakage past gate seals, missing seals, degradation or damage, etc.]*				
Are gates in good condition and functioning properly? *[Look for steel corrosion, loss of material/section, warping of members, etc.]*				
Has the plant reported any prior issues with leakage at gates? If yes, have any repair techniques been implemented? *[List any repair technique, location of leakage, causes, effectiveness of repair, etc.]*				
If leakage is present, is it possible to measure or quantify the flow rate? *[Record measurements or observations for future comparison (i.e., Are conditions worsening?]*				

Leakage and Releases Check List - Continued				
Topic	**Yes**	**No**	**N/A**	**Comments/Details**
C. Leakage - Seepage				
Has the plant had any previous issues with seepage and is seepage currently visible downstream of the reservoir? *[If yes, observe previous seepage locations, document current condition, and quantify severity of seepage (i.e. minimal, moderate, severe). Have conditions worsened, improved, or remained the same?]*				
If the plant has experienced previous issues with seepage, were any techniques or repairs implemented to reduce or prevent the seepage? *[Indicated whether repair methods were successful]*				
Is there appearance of sinkholes downstream of the reservoir? *[Indicate size and location of sinkholes. May indicate seepage issues.]*				
Have there been any muddy tailwater flow previously observed or recorded? *[Indicate when the flow occurred and how long it lasted. May indicate seepage issues.]*				

Leakage and Releases List - Continued				
Topic	**Yes**	**No**	**N/A**	**Comments/Details**
D. Releases				
Does the plant have a minimum downstream flow requirement? *[If yes, what is the requirement, source of requirement (i.e. dissolved oxygen levels), how is the plant currently meeting the requirement (time and method of release), etc.?]*				
Is the plant currently releasing water from spillways and sluiceways exceeding the minimum requirement? *[If yes, what is the reason for the excess release (i.e. poor gate calibration)? Is the amount of release measured and regularly documented?]*				
How is the flow rate of spillway and sluiceways releases calculated? *[Charts, formulas, computer programs]*				
Are spillways and sluiceways routinely inspected and calibrated? *[If yes, how are they calibrated and what is the frequency of inspection?]*				

Leakage and Releases

Assessment Conclusions and Recommendations:

For overall questions
please contact:

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