Initial Hazard Potential Classification Assessment

Intermountain Power Bottom Ash Basin (UT00463)
CCR Surface Impoundment

October 17, 2016

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1.0 Introduction

On April 17, 2015 the EPA published its final rule in the Federal Register to regulate disposal of coal combustion residuals ("CCR") as a solid waste under subtitle D of the Resource Conservation and Recovery Act ("RCRA"). The effective date of this final rule was October 19, 2015. This final rule established several requirements for existing and new CCR landfills and existing and new CCR surface impoundments. Among them was the requirement to have a qualified professional engineer conduct initial and periodic hazard potential classification assessments of the CCR surface impoundments, with the initial hazard potential classification assessment due no later than October 17, 2016. The requirements for the hazard potential classification assessment for surface impoundments are outlined in §257.73(a)(2).

The Intermountain Power Project ("IPP") is located in Millard County Utah. The IPP is also sometimes known as the Intermountain Generating Station ("IGS"). The IPP is owned by Intermountain Power Agency ("IPA") and operated locally by Intermountain Power Service Corporation ("IPSC"). IPP has two CCR surface impoundments. This hazard potential classification assessment is for one of these CCR surface impoundments, namely "Intermountain Power Bottom Ash Basin (UT00463)".

The purpose of this report is to document the initial hazard potential classification assessment on the Intermountain Power Bottom Ash Basin (UT00463) surface impoundment. This is the first or initial hazard potential classification assessment done under the CCR rule on this CCR surface impoundment since the rule went into effect on October 19, 2015.

2.0 Hazard Classification Potential Assessment Requirements

2.1 Hazard Potential Classification Assessment Requirements – EPA's Final CCR Rule

In accordance with §257.73(a)(2), the hazard potential classification assessment must be done periodically with the first one being due by October 17, 2016. The rule requires that the owner or operator document the hazard potential classification for each CCR surface impoundment as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. This assessment must be certified by a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification was conducted in accordance with the requirements of the CCR rule.

2.1.1 High Hazard Potential as Defined Under EPA's Final CCR Rule

In the preamble to the final CCR Rule, EPA states "*High hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation will probably cause loss of human life."

2.1.2 Significant Hazard Potential as Defined Under EPA's Final CCR Rule

In the preamble to the final CCR Rule, EPA states "*Significant hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns."

2.1.3 Low Hazard Potential as Defined Under EPA's Final CCR Rule

In the preamble to its Final CCR Rule, EPA states "*Low hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation results in no probable loss of life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment's owner's property."

2.2 Hazard Potential Classification Requirements – Utah Division of Water Rights

The Utah Division of Water Rights places the hazard classification of a dam into a category based on the consequences of failure of the dam. It classifies dams into three categories – high hazard, moderate hazard, and low hazard. The criteria for these classifications are as follows.

2.2.1 High Hazard Dam - Utah Division of Water Rights

The Utah statute classifies a high hazard dam as follows: "high hazard – those dams which, if they fail, have a high probability of causing loss of human life or extensive economic loss, including damage to critical public utilities"

2.2.2 Moderate Hazard Dam - Utah Division of Water Rights

The Utah statute classifies a moderate hazard dam as follows: "moderate hazard – those dams which, if they fail, have a low probability of causing loss of human life, but would cause appreciable property damage, including damage to public utilities"

2.2.3 Low Hazard Dam - Utah Division of Water Rights

The Utah statutes classifies a low hazard dam as follows: "low hazard – those dams which, if they fail, would cause minimal threat to human life, and economic losses would be minor or limited to damage sustained by the owner of the structure". The Utah Division of Water Rights classifies the Bottom Ash Basin dike a "**Low Hazard**" dam.

2.3 Hazard Potential Classification Assessment – EPA's Engineering Consultant

The EPA retained an engineering consultant, GEI Consultants, Inc. ("GEI"), to perform a CCR waste impoundment assessment on the impoundments at IGS in September of 2010. GEI came onsite in October of 2010 and did a specific site assessment of IGS's CCR surface impoundments. GEI's specific site assessment was performed with reference to Federal Emergency Management Agency ("FEMA") guidelines for dam safety, which includes other federal agency guidelines and regulations (such as U.S. Army Corps of Engineers ("USACE") and U.S. Bureau of Reclamation ("USBR")) for specific issues, and included defaults to state requirements where not specifically addressed by federal guidance or if the state requirements were more stringent. GEI submitted its report titled "Specific Site Assessment for Coal Combustion Waste Impoundments at Intermountain Generating Station Delta, Utah" to the EPA in April of 2011. This assessment report was signed by Stephen G. Brown, a registered professional engineer. GEI's recommendation in its assessment report to the EPA was that the Bottom Ash Basin be classified as a "Low Hazard" structure.

3.0 Hazard Potential Classification Assessment

This hazard potential classification assessment is for Intermountain Power Bottom Ash Basin (UT00463). As noted above, in April of 2012, GEI performed an assessment on this Bottom Ash Basin and recommended to the EPA that the it be classified as a "Low Hazard" structure. Further, the Utah Division of Water Rights classifies the Bottom Ash Basin as a "Low Hazard" dam.

The Bottom Ash Basin has a structural height of about 46 feet, a surface area of about 105 acres, and a nominal capacity of about 3421 acre-feet. The Bottom Ash Basin is not located on a waterway. The Bottom Ash Basin is located about 0.9 miles away from IGS's closest property boundary. The terrain around the Bottom Ash Basin is a flat topography and does not have any well-defined drainage(s) that would convey water offsite. IGS is located in a dry area and there are no sources of surface water within

several miles of the Bottom Ash Basin. There is no developed property within several miles of IGS.

An uncontrolled release of the Bottom Ash Basin's contents due to a failure or mis-operation would not be considered to cause loss of human life and the economic and environmental damages would be relatively low. The flooded area would be limited. It would also only have shallow depths because of the very flat surrounding topography. Based on the pond height and volume, the inundation area would be limited to IGS property, which is very large and does not have developed property within several miles of the power plant.

The Bottom Ash Basin embankment is a "Low Hazard" structure.

4.0 Qualified Professional Engineer

The rule requires that the hazard potential classification assessment be prepared by a qualified professional engineer. This hazard potential classification assessment was prepared by me, Hyrum Blaine Ipson. I am a registered professional engineer and have been conducting inspections on surface water storage impoundment embankments for over 33 years. I certify that I prepared this hazard potential classification assessment and that the information contained herein is true and correct to the best of my knowledge.

Hyrum Blaine Ipson, P.E. — 10-17-16 (Date)