MEMORANDUM

SUBJECT: EPA Comments on "Assessment of Dam Safety of Coal Combustion Surface Impoundments: San Miguel Electric Coop, Inc, San Miguel Power Plant, Christine, TX

DATE: December 20, 2013

No Comments.

Subject: Comment Request on Coal Ash Site Assessment Round 12 Draft Reports – San Miguel Electric Co-op – San Miguel Electric Plant

Dear Mr. Hoffman,

Thank you for the opportunity to review the draft report for the two impoundments at the San Miguel Electric Plant. We have reviewed the draft assessment report and provide the following comments.

Ash Water Transport Pond Level: In numerous places in the report it is stated that the level in the pond was one foot above the target pool elevation. This is incorrect. The Ash Water Transport Pond was below the target pool elevation per the operator log of August 30, 2012. Six readings were taken during the 24 hour period and observations ranged from -.75" to -1.5". This log is attached for your review. We also reference our inspection reports in Appendix D for the four weeks prior to the CDM Impoundment Inspection. In those reports all Ash pond levels were near the zero point. We have attached a copy of our inspection from September 7, 2012 report for your review. For comparison purposes, we have also attached pictures taken on January 3, 2014 that are similar to pictures 78 and 79 in the report. If you review picture 78, taken by the CDM representative, you should be able to zoom in on the level gauge which will show the level was below the zero point, which is the pool level. We have also attached a picture taken on January 3, 2014 of a close up of the level gauge. This is a reoccurring factor in the report, which we believe has an impact on several recommendations and conclusions. We respectfully ask that this error be corrected and the impacted recommendations/conclusions be modified accordingly.

Distance to Atascosa River: Appendix C to the report contains an Impoundment Inspection form for both the Ash Water Transport Pond and the Sludge Disposal Basin. Under the heading "" Reasoning for Hazard Rating Chosen" for both impoundments, it is incorrectly stated that liquids would likely flow to the Atascosa river located 1.3 miles from the plant site. The Atascosa River is located approximately 16.5 stream miles from the plant. The flow path to get to the Atascosa River would be first to the normally dry Souse Creek, then to the La Parita Creek approximately 4.2 miles stream miles from the power plant and ending at the Atascosa River. We respectfully ask that the distance to the Atascosa River be modified to reflect that the river is approximately 16.5 miles from the plant, and that Hazard Rating be reconsidered.

Comments/Error corrections/suggested changes:

Section 1.3.1.2: Correct pond elevation to 1 inch below target pool elevation. We believe that this modification would change the hydrologic/hydraulic safety determination to "adequate." Suggested changes follow:

> No hydrologic and hydraulic information was provided by San Miguel to indicate CCW impoundments hydrologic/hydraulic safety. A target pool elevation of at least 18 inches of freeboard at both the Ash Pond and Sludge Basin was the only hydraulic information provided by San Miguel. ~~Because~~ the Ash Pond was 1 ~~foot above~~ inch below the target pool elevation

during the site assessment and no hydrologic/hydraulic documentation was provided, the hydrologic/hydraulic safety is judged to be ~~in~~adequate.

Section 1.3.1.6: Since the water levels were below the target pool level, everything in the first paragraph after the words "generally adequate" should be deleted. Suggested changes follow:

Current maintenance and operation procedures appear to be generally adequate, ~~though operating procedures resulted in water levels above the target pool elevation in the Ash Pond at the time of the site assessment. Operating procedures for the Ash Pond should be reassessed to address the high water level.~~

Section 1.3.1.7: Add to the first sentence, "by the environmental engineer and levels are checked by the operation department six times daily". Correct the sentence on high water level in the ash pond. Provide information on local level gauges at the ponds. We believe that these modifications change the conclusion regarding more detail and/or frequent inspections and ask that you reconsider that conclusion. Suggested changes follow:

Surveillance and monitoring procedures include checking the impoundments for leaks or deficiencies, and recording pool levels for both the Ash Pond and Sludge Basin once a week by the environmental engineer and levels checks six times daily by the operations department. There is no remote instrumentation only local level gauges for the Ash Pond ~~or~~ and Sludge Basin. Because of the ~~high water level in the Ash Pond and~~ erosion into the Ash Pond's east embankment slope from a leaking pipe, the surveillance and monitoring program should be revised to include more-detailed ~~and/or more frequent~~ inspections.

Section 2.1: 2nd paragraph, sixth line, change to, "Ash Pond was last dredged in2005."

Section 2.2: The ash pond does not receive liquids from the scrubber discharge. In the first paragraph second line delete the words, "scrubber discharge".

Section 2.2.1: The following statement is made: "From the fly ash silo the fly ash can be sold (as a Portland cement substitute) or mixed with the scrubber sludge to be disposed of in the mine." Modify sentence as follows: "From the fly ash silo the fly ash is sold (as a Portland Cement substitute) or mixed with the scrubber sludge for placement in the mine for reclamation purposes."

Section 2.2.2: Modify "The dewater bottom ash is loaded into trucks and disposed of in the mine" to "The dewatered bottom ash is loaded into trucks and placed in the mine for reclamation purposes."

Section 2.2.4: Modify "The solids (75 to 80% solid) are then mixed with the fly ash so the dry mixture can be disposed of in the mine" to "The solids (75 to 80% solid) are then mixed with the fly ash so the dry mixture can be placed in the mine for reclamation purposes."

Section 2.3, Table 2-3: We do not believe there would be any economic or environmental damage to the Atascosa River. We suggest the wording in the first bullet to be modified as follows:

- Failure or miss-operation could result in economic and environmental damage to the adjacent creek. Based on the above discussion, we also ask that the Hazard Rating be reconsidered.

Section 2.6: In first paragraph, first sentence after "Atascosa River" add, "which is approximately 16.5 stream miles from the Plant." Change wording in the other paragraphs to delete "Atascosa River". Suggested changes follow:

Based on available topographic maps, surface drainage in the vicinity of the San Miguel Electric Plant appears to be to the northwest towards creeks that flow to the Atascosa River, which is approximately 16.5 steam miles from the Plant. Critical infrastructure identified within five miles downgradient of the Plant includes overhead high voltage power lines. No schools, hospitals, waterways, roadways and bridges, and other major facilities were identified within five miles of the Plant site. Places of worship shown on Figure 2-1 are more than 5 miles from the Plant and are not downgradient of the impoundments.

Discharge from both impoundments would likely flow directly into the dry creek~~s~~ located south of the Ash Pond and west of the Sludge Basin. The dry Creek~~s~~ adjacent to the Plant site discharge into the LaParita Creek approximately 4.2 miles from the Plant ~~Atascosa River~~. High voltage power lines are located adjacent to both the Ash Pond and Sludge Basin, between the impoundment and creeks.

Liquids discharged from a breach of the impoundment embankments would likely result in economic and limited environmental damage to Plant property, adjacent rural property, adjacent creek~~s, and the Atascosa River~~, and is not expected to result in loss of human life.

Section 4.2.3: In paragraph following Table 4-1, change the wording in second line to, "in 2010 sludge was partially excavated from the Sludge Basin.

Section 5.3.4: Please add the following clarification at the end of the paragraph, "Both of these outlets are pumped to the Ash Water Transport Pond for recycling of the water."

Section 8.1: 2nd paragraph fourth line change, "…Ash Pond or reuse…" to "Ash Pond for reuse…"

Section 8.3.1: Since the pond level was below the target pool elevation the last two sentences should be deleted. Suggested changes follow:

Based on CDM Smith's visual observations and review of documents provided by San Miguel, operating procedures appear to be generally adequate for the impoundments. ~~Although it should be noted that the water level in the Ash Pond at the time of CDM Smith's visual assessment was 1-foot above the target pool level. Therefore, operating procedures may need to be reassessed to lower the pool level in the Ash Pond.~~

Section 8.3.2: Since there wasn't a high level in the ash pond, the following words should be deleted from the 1st line in the 1st paragraph, "a high water level in the impoundment," The sentence, therefore, should read: "Maintenance issues at the Ash Pond included an area of erosion at the east…"

Section 9.1: We request modification to the first paragraph to correct the frequency of times the impoundment levels are monitored. Suggested changes follow:

~~There are no known~~ The surveillance procedures ~~other than measuring~~ include the measurement of water levels and checking for leaks or other deficiencies at each of the impoundments. Water levels are measured and recorded ~~once a week~~ six times daily for the Ash Pond and Sludge Basin by the operations department. Water levels are measured from a reference level at 18 inches of freeboard at each impoundment. Documentation of the water levels includes a checklist report, performed once a week by the Plant Environmental Engineer, with water level and whether leaks or other deficiencies were observed in each impoundment. Checklists from August 2012 are included in Appendix D.

Section 9.3.1: 1st line delete the words, "high level in the ash pond and". We do not believe the "more-frequent" inspection in 3rd line are justified so those words should also be deleted. Suggested changes follow:

> Because of the ~~high water level in the Ash Pond and~~ erosion into the Ash Pond's east embankment slope from a leaking pipe, the surveillance and monitoring program should be revised to include more-detailed ~~and/or more-frequent~~ inspections. The area of potential seepage at the west embankment exterior slope of the Ash Pond should be investigated and monitored.

Appendix C, checklist for Ash Water Transport Pond: Inspection issue, #6. Should read, "water level is measured six times daily from a float referenced to 18" freeboard"

Appendix C, Coal Combustion Waste (CCW) Impoundment Inspection, Ash water Transport Pond: page 2, changes to Description for Hazard Rating Chosen: Request the following changes/correction:

> Failure or misoperation of the impoundment would result in economic loss and environmental damage. Impoundment is located near facility boundary. Adjacent property includes cattle fields and property leased by the local mining. Liquids would likely flow ~~to~~ towards the Atascosa River, situated approximately ~~1.3~~ 16.5 stream miles northeast of the San Miguel Plant. Also, structures supporting high voltage power line ~~would likely~~ possibly be impacted by failure of impoundment.

Appendix C, Coal Combustion Waste (CCW) Impoundment Inspection, Ash water Transport Pond: page 3, current freeboard should be corrected to "-1 inch ".

Appendix C, checklist for Sludge Disposal Basin: Inspection issue, #6. Should read, "water level is measured six times daily referenced to 18" freeboard"

Appendix C, Coal Combustion Waste (CCW) Impoundment Inspection, Sludge Disposal Basin: page 2, changes to Description for Hazard Rating Chosen: Request the following changes/correction:

> Failure or misoperation of the impoundment would result in economic loss and environmental damage. Impoundment is located near facility boundary. Adjacent property includes cattle fields and property leased by the local mining. Liquids would likely flow ~~to~~ towards the Atascosa River, situated approximately ~~1.3~~ 16.5 stream miles northeast of the San Miguel Plant.

If you have any questions or need clarification concerning any of these comments please call me.

Sincerely,

Joseph Eutizi
San Miguel Electric Cooperative
Engineering Manager
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830 – 784-3411 ext. 226

WEEKLY FACILITY INSPECTION REPORT

PLANT DITCHES AND PONDS

DATE: 9-17-12

INSPECTION AREA	LEAKS OR DEFICIENCIES	COMMENTS
DITCHES		
EAST SIDE STORM DRAINAGE	YES / (NO)	
WEST SIDE STORM DRAINAGE	YES / (NO)	
LIGNITE YARD DRAINAGE	YES / (NO)	
COOLING TOWER AREA	YES / (NO)	
PONDS		
EQUILIZATION	YES / (NO)	LEVEL: -88 inches from 18" freeboard
LIGNITE YARD RETENTION	YES / (NO)	LEVEL: [redacted]-76 inches from 18" freeboard
ASH DISPOSAL 1A	YES / (NO)	LEVEL: +1 inches from 18" freeboard
ASH DISPOSAL 1B (seepage; same)	YES / (NO)	LEVEL: +1 inches from 18" freeboard
WATER WELL STORAGE	YES / (NO)	LEVEL: -24 inches from 18" freeboard

PLANT PROCESS AREAS

DATE: _____

INSPECTION AREA	LEAKS OR DEFICIENCIES	COMMENTS
BOILER AREA EQUIPMENT, PUMPS, PIPING SLAB	YES / (NO) YES / (NO)	
PRECIPITATOR EQUIPMENT, PUMPS, PIPING SLAB	YES / (NO) YES / (NO)	
SCRUBBER EQUIPMENT, PUMPS, PIPING SLAB	YES / (NO) YES / (NO)	
FGD EQUIPMENT, PUMPS, PIPING SLAB	YES / (NO) YES / (NO)	
LABORATORY INSIDE OUTSIDE	YES / (NO) YES / (NO)	


14
12
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9

San Miguel Electric Coop.
Operations Department
Bottom Ash

Date: 30 Aug 12	2000	0000	0400	0800	1200	1600
Continuous Pump 1A	120	115	120	120	110	110
Continuous Pump 1B						
Continuous Pump 1C						
Continuous Pump 1D	114	114	114	110	105	110
Conveying Pump 1A	150	148	158	158	160	160
Conveying Pump 1B						
Conveying Pump 1C						
Conveying Pump 1D	182	178	184	184	185	180
Retention Pond Pump	NR			NR	NR	NR
Wier Level (+ or - normal level of 0) (Ash water TR. Pond)	-.75	-1	-1	-1.5	-1.5	-1.5
Blowdown To Ash Pond FCV-16						
Equalization Pond Pump (Sludge Basin)	NR	NR	NR	NR	NR	NR
Equalization Pond Level (+ or - from 0)	Low	Low	Low			
Conveying Booster Pump 1A						
Conveying Booster Pump 1B	315	320	305	300	320	320
Conveying Booster Pump 1C						
Conveying Booster Pump 1D	320	325	285	305	325	325
Pressure Control Valves 32	320	325	290	325	325	325
Pressure Control Valves 33						
Bottom Ash system pressure	311	294	320	320	320	315
North bottom ash hopper overflows- vaccuum yes-no	yes	yes	yes	Y	Y	Y
Center bottom ash hopper overflows- vaccuum yes-no	yes	yes	yes	Y	Y	Y
South bottom ash hopper overflows-vaccuum yes-no	yes	yes	yes	Y	Y	Y
Boiler seal troughs drains	✓	✓	✓	✓	✓	✓
Boiler seal troughs overflows						
Seal Trough	✓	✓	✓			
Pulverizer Pyrite Box 1A	✓	✓	✓	✓	✓	✓
Pulverizer Pyrite Box 1B						
Pulverizer Pyrite Box 1C	✓	✓	✓	✓	✓	✓
Pulverizer Pyrite Box 1D	✓	✓	✓	✓	✓	✓
Pulverizer Pyrite Box 1E	✓	✓	✓	✓	✓	✓
Pulverizer Pyrite Box 1F	✓	✓	✓	✓	✓	✓
Pulverizer Pyrite Box 1G	✓	✓	✓	✓	✓	✓
	2000	0200	0800	1400		
Fly Ash Blower 1A	✓	✓	✓	✓		
Fly Ash Blower 1B	✓	✓	✓	✓		
Fly Ash Blower 1C						
Fluidizing Blower A	✓	✓	✓	✓		
Fluidizing Blower B						
Fluidizing Temp. **	340	340	335	360		
Check Pressure System	✓	✓	✓	✓		
TR Fields in Service	✓	✓	✓	✓		
Check Rappers	✓		✓	✓		
Check In's	✓		✓	✓		
Notes or MRs:						

Night Shift Richard Davis

Day Shift John I.

*Maximum 20 psi Differential
** Minimum 260 Degrees F