FOUR CORNERS POWER PLANT
Lined Ash Impoundment,
Lined Decant Water Pond,
Combined Waste Treatment Pond,
Upper Retention Sump, and
Dry Fly Ash Disposal Area

Annual
CCR Impoundment and
Landfill Inspection Report

2016

GENERATION ENGINEERING
Design Engineering
P.O. BOX 53999
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1.0 INTRODUCTION

AECOM prepared this report for Arizona Public Service Company (APS) to comply with the Environmental Protection Agency's (EPA) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule (2015) requiring "*…inspections by a qualified professional engineer at intervals not exceeding one year to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards.*" (CFR 257.83(b)(1) for CCR surface impoundments and CFR 257.84(b)(1) for CCR landfills.)

This report includes a review of relevant data in the operating record as well as visual inspections of the Lined Ash Impoundment, the Lined Decant Water Pond, the Combined Waste Treatment Pond, the Upper Retention Sump, and the Dry Fly Ash Disposal Area. The Lined Ash Impoundment and Lined Decant Water Pond are instrumented with piezometers, inclinometers, settlement monuments, and settlement rods.

Inspection Conducted by

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2.0 SITE BACKGROUND AND INSPECTION CONDITIONS

The Four Corners Power Plant (FCPP, the Plant) is located in Fruitland, New Mexico, approximately 20 miles west of Farmington, New Mexico and 13 miles southeast of Shiprock, New Mexico. The Plant is immediately south of Morgan Lake and primarily in Section 36, Township 29 North, Range 16 West on the Navajo Indian Reservation in San Juan County. Units 1, 2 and 3 are permanently closed and decommissioned. Units 4 and 5 burn low sulfur coal and have a total net generating capacity of 1,540 megawatts.

The coal combustion process produces bottom ash (silty sand, Unified Soil Classification System SM), fly ash (low plasticity silt, Unified Soil Classification System ML), and flue gas desulfurization (FGD) solids. The Plant is operated as a low volume water usage system and has four coal combustion waste impoundments. The Lined Ash Impoundment (LAI) is used for Coal Combustion Residuals (CCR) disposal and the Lined Decant Water Pond (LDWP) is used to temporarily store water drained from the LAI. The Dry Fly Ash Disposal Area (DFADA) is a CCR landfill used to dispose of dry CCR from Units 4 and 5. The Upper Retention Sump collects water from drains located on the Plant site and receives coal combustion residuals in storm water, process water, and Plant washdown from several sources within the Plant. The Combined Waste Treatment Pond (CWTP) is a settling pond for bottom ash sluice water and various storm water, process water, and Plant washdown streams. The CWTP discharges through an NPDES-permitted outfall to Morgan Lake. These five coal combustion waste facilities are the subject of this inspection report.

The field inspection was conducted on Monday, October 17, 2016 and Tuesday, October 18, 2016. Conditions were mild (40-80 degrees Fahrenheit) with clear skies. Winds were light throughout both days. Approximately 3.13 inches of precipitation had fallen since the start of the year based on data recorded at the Four Corners Regional Airport in Farmington, New Mexico (Weather Underground 2016).

Instrumentation at the LAI and LDWP generally consists of open standpipe PVC piezometers, vibrating wire piezometers, inclinometers, settlement monuments, and settlement rods measured using a Global Positioning Survey (GPS) System. Water levels in the open standpipe piezometers are measured with an electronic water level indicator attached to a cable stamped with increments to 0.01 feet. Water level data for the vibrating wire piezometers are downloaded at a central readout box and processed by Plant personnel. Inclinometers, settlement monuments, and settlement rods are also read and processed by Plant personnel.

The benchmarks for the elevations reported for GPS surveys of the settlement monuments at the Four Corners Power Plant are based on one of three survey monuments: EMMA, an aluminum cap, and two Southern California Edison (SCE) brass caps – HV-53, and HV-61. The latitude and longitude of the monuments are based on the NAD83 datum. The elevations of EMMA, HV-53, and HV-61 are 5382.251, 5331.214, and 5085.898 feet, respectively.

3.0 IMPOUNDMENT DESCRIPTIONS

3.1 LINED ASH IMPOUNDMENT (LAI)

The LAI is represented on Figure 1 – Lined Ash Impoundment (LAI).

The LAI (listed by the New Mexico Office of the State Engineer (NMOSE) Dam Safety Bureau as dam number D-634) was constructed between 2003 and 2014, has a maximum storage capacity of 5,986 acre-feet, and is approximately 107 feet high. The embankment is approximately 6,400 feet long and is classified under the New Mexico Administrative Code (NMAC) as "intermediate" size and "significant" hazard potential. The impoundment is lined with a single HDPE geomembrane. The nominal (lowest) crest elevation (EL) is 5280.0 feet. The maximum operating water level is EL 5275.2 feet and the water level was observed to be at EL 5272.25 feet during the inspection.

3.2 LINED DECANT WATER POND (LDWP)

The LDWP is represented on Figure 2 – Lined Decant Water Pond (LDWP).

The LDWP (NMOSE dam number D-635) was constructed in 2003, has a maximum storage capacity of 435 acre-feet, and has a statutory height of approximately 16 feet (the LDWP was constructed on top of Ash Pond 3 and is 90 feet above the original ground surface along the South and West Embankments). The embankment is approximately 5,488 feet long and is classified under the NMAC as "intermediate" size and "significant" hazard. The impoundment is lined with a two HDPE geomembranes and a leak detection layer. The maximum surcharge reservoir level is EL 5213.2 feet and the reservoir level was observed to be at approximate EL 5207.5 feet during the inspection.

3.3 COMBINED WASTE TREATMENT POND (CWTP)

The CWTP is represented on Figure 3 – Combined Waste Treatment Pond (CWTP).

The CWTP is an approximately 13-acre unlined detention pond located adjacent to Morgan Lake. The CWTP is not regulated by NMOSE. It was constructed in 1978, has a maximum storage capacity of 137 acre-feet, and is approximately 32 feet high. The embankment is approximately 1,800 feet long and is classified under the NMAC as "small" size and "low" hazard. The CWTP is used as a settling basin for ash-impacted wastewater prior to discharge to Morgan Lake through a monitored National Pollutant Discharge Elimination System (NPDES) permitted discharge point. The primary source of water entering the CWTP is from bottom ash recovery and transport processes at Units 4 and 5 (U45). Bottom ash is hydraulically transported to the Units 4 and 5 hydrobins where the transport water is separated and conveyed to the CWTP. Ash and other sediment settle in separate earthen settling basins within the CWTP footprint prior to the water overflowing into the main CWTP.

3.4 UPPER RETENTION SUMP

The Upper Retention Sump is represented on Figure 4 – Upper Retention Sump.

The Upper Retention Sump is an approximately 2-acre, unlined surge pond associated with operation of the flue gas desulfurization (FGD) systems for treatment of flue gas from Units 4 and 5. The Upper Retention Sump is not regulated by NMOSE. Lime slurry is transferred to from the Upper Retention Sump into various FGD absorber vessels as needed to operate and maintain the overall FGD system.

3.5 DRY FLY ASH DISPOSAL AREA (DFADA)

The DFADA is represented on Figure 5 – Dry Fly Ash Disposal Area (DFADA).

The DFADA is a lined landfill and dry fly ash disposal facility. The DFADA currently consists of three conjoined cells: Sites 1, 2, and 3. The Site 1 cell was constructed in 2007, the Site 2 cell was constructed in 2012, and construction of the Site 3 cell began in 2014. The DFADA has a maximum intended capacity of 6,261 acre-feet and an ultimate maximum height of approximately 105 feet. Site 1 is constructed with an HDPE geomembrane overlaying a compacted clay subgrade material. Sites 2 and 3 are constructed with a composite liner system selected for general compliance with the EPA's *Guide for Industrial Waste Management*: a geosynthetic clay liner (GCL) overlain by an HDPE geomembrane. A drainage layer was installed over the HDPE geomembrane in all three cells as recommended in the EPA guidance. Each cell is connected to a leachate collection system designed to remove water from the storage area. The leachate collection system generally consists of a drainage layer, collection piping, a removal system, and a protective filter layer.

4.0 FIELD INSPECTIONS

This section contains the 2016 annual field inspections conducted by APS and accompanied by a representative from AECOM at the LAI (Section 4.1), the LDWP (Section 4.2), the CWTP (Section 4.3), the Upper Retention Sump (Section 4.4), and the DFADA (Section 4.5).

4.1 APS FIELD INSPECTION – LINED ASH IMPOUNDMENT (LAI)

<table>
<tr><td colspan="2">Lined Ash Impoundment (LAI)</td><td colspan="2">State Identification Number (SID): D-634</td><td rowspan="15">Not Applicable</td><td rowspan="15">No</td><td rowspan="15">Yes</td><td rowspan="15">Monitor</td><td rowspan="15">Repair</td><td rowspan="15">Investigate</td></tr>
<tr><td>SID: D-634</td><td>Dam Name: Lined Ash Impoundment (LAI)</td><td>Type: Zoned earth and ash fill with geomembrane</td><td>Purpose: Fly ash and FGD sludge disposal</td></tr>
<tr><td colspan="2">Contact(s): Byron Conrad, P.E. (APS)</td><td colspan="2">Report Date: January 13, 2017</td></tr>
<tr><td colspan="2">Inspected by: Byron Conrad, P.E. (APS), Cletis Mark (APS), Lee Wright, P.E. (AECOM)</td><td colspan="2">Inspection Date: October 18, 2016</td></tr>
<tr><td colspan="2">Reviewed by: Byron Conrad, P.E. (APS)</td><td colspan="2">Review Date: December 29, 2016</td></tr>
<tr><td colspan="2">Design Dam Crest Elevation (ft): 5,280</td><td colspan="2">Design Spillway Crest Elevation (ft): 5,277.84
(rim of 8-foot-diameter riser; no spillway)</td></tr>
<tr><td colspan="2">Design Total Freeboard (ft): 4.8</td><td colspan="2">Measured Total Freeboard (ft): 7.75</td></tr>
<tr><td colspan="2">Statutory Dam Height (ft): 107 (South Embankment)</td><td colspan="2">Structural Height (ft): 107 (South Embankment)</td></tr>
<tr><td colspan="2" rowspan="2">Dam Crest Length (ft): 6,400</td><td>Upstream Slope:
3:1 (West Embankment)
2:1 (South Embankment)</td><td>Downstream Slope:
3:1 (West Embankment)
2:1 (South Embankment)</td></tr>
<tr><td colspan="2">Dam Crest Width (ft): 30 (West Embankment)
20 (South Embankment)</td></tr>
<tr><td rowspan="2">Lat: 36° 41' 05"
(per NMOSE permit)</td><td rowspan="2">Water Rights: N/A</td></tr>
<tr><td>Long: 108° 30' 26"
(per NMOSE permit)</td></tr>
<tr><td colspan="2">Reservoir Area (acres): 129.16 (at EL 5280 ft)</td><td colspan="2">Reservoir Storage (ac-ft): 5,364
(normal operating capacity)</td></tr>
<tr><td colspan="4">Inflow Design Flood/Safe Flood-Passing Capacity: PMF – fully contained</td></tr>
<tr><td colspan="2">Reservoir Level During Inspection (ft): 5,272.25</td><td>Photos: Yes</td><td>Pages: 5</td></tr>
</table>

Lined Ash Impoundment (LAI)	SID: **D-634**	N/A	No	Yes	Mon	Rep	Inv

COMPLIANCE CHECKLIST									
1	***CONDITION SUMMARY, LICENSE, EAP, NEXT INSPECTION***								
a	Recorded downstream hazard: **Significant**	Should hazard be revised?		**X**					
b	If high hazard, estimate downstream persons-at-risk (PAR): **N/A**	Is there a significant increase since the last inspection?		**X**					
c	Recorded size: **Intermediate**	Should size be revised?		**X**					
d	Any safety deficiencies? **No**	Describe:		**X**					
e	Any statute or rule violations? **No**	Describe and list required action:		**X**					
f	Safe storage level on License: **5,275.2 feet**	Should level be revised:		**X**					
g	Any License violations? **No**	Describe and list required action:		**X**					
h	Date of current License: **October 27, 2015**	Should new License be issued?		**X**					
i	Date of last Emergency Action Plan revision: **12/2014**	Should EAP be revised? **See Comment i.**			**X**				
j	Any Agency actions? **No**	Describe and list required action:		**X**					
k	Normal inspection frequency: **Annually**	Should inspection frequency be revised?		**X**					
l	Recommended date for next inspection: **October 2017**								

MONITORING CHECKLIST									
2	***INSTRUMENTATION AND MONITORING***								
a	Describe: **West Embankment** **1) Six clusters of three vibrating wire piezometers each (varying elevations),** **2) Four buried settlement rods to measure settlement at depth,** **3) Two inclinometers, and** **4) Two crest survey/settlement monuments.** **North Toe Buttress** **1) Ten clusters of three vibrating wire piezometers and one cluster of two vibrating wire piezometers (varying elevations),** **2) Eight buried settlement rods to measure settlement at depth, and** **3) Three inclinometers.** **Other** **1) Permanent water elevation markers on the geomembrane liner at three locations within the impoundment.** **2) No inflow or outflow measurement devices.**								
b	Any repair or replacement required? **Yes**	Describe: **Ash is covering the water elevation marker near the Drop Inlet Riser. See Comment ii.**			**X**	**X**			
c	Date of last monitoring report: **January 2016**	Should new readings be taken and new report provided? **Monthly measurement and annual reporting is required.**		**X**					

DAM EMBANKMENT CHECKLIST									
3	***DAM CREST***								
a	Settlements, slides, depressions? **See Comment v.**				**X**	**X**			
b	Misalignment?			**X**					
c	Longitudinal/Transverse cracking?			**X**					
d	Animal burrows?			**X**					
e	Adverse vegetation?			**X**					
f	Erosion?			**X**					

Lined Ash Impoundment (LAI)	SID: **D-634**	N/A	No	Yes	Mon	Rep	Inv
4	***UPSTREAM SLOPE***						
a	Erosion? **The upstream slope is covered with geomembrane.**		**X**				
b	Inadequate ground cover?		**X**				
c	Adverse vegetation? **Two shrubs were observed growing through the geomembrane. See Comment vi.**			**X**		**X**	**X**
d	Longitudinal/Transverse cracking?		**X**				
e	Inadequate riprap?	**X**					
f	Stone deterioration?	**X**					
g	Settlements, slides, depressions, bulges?		**X**				
h	Animal burrows?		**X**				
5	***DOWNSTREAM SLOPE***						
a	Erosion? **Evidence of repairs along the West Embankment (see photo IMG_1771) and minor erosion in the groin of the Northwest Embankment (see photo IMG_1946 and Comment viii).**			**X**	**X**		
b	Inadequate ground cover? **The West and South Embankment slopes are faced with bottom ash that does not generally support vegetation.**		**X**				
c	Adverse vegetation?		**X**				
d	Longitudinal/Transverse cracking?		**X**				
e	Inadequate riprap?	**X**					
f	Stone deterioration?	**X**					
g	Settlements, slides, depressions, bulges?		**X**				
h	Soft spots or boggy areas?		**X**				
i	Movement at or beyond toe?		**X**				
j	Animal burrows?		**X**				
6	***ABUTMENT CONTACTS***						
a	Erosion?		**X**				
b	Differential movement?		**X**				
c	Cracks?		**X**				
d	Settlements, slides, depressions, bulges?		**X**				
e	Seepage?		**X**				
f	Animal burrows?		**X**				

7	***SEEPAGE/PIPING CONTROL DESIGN FEATURE(S)***						
a	Describe: **Historic seepage at the downstream toe of the South Embankment is captured using a French drain beneath the toe. There was no flow from the outlet at the time of inspection (see photo IMG_1910).**						
b	Internal drains flowing?		**X**				
c	Seepage at or beyond toe?		**X**				
d	If so, does seepage contain fines?	**X**					
e	Evidence of sand boils at or beyond toe?		**X**				

	RESERVOIR CHECKLIST						
8	***RESERVOIR***						
a	High water marks?			**X**			
b	Erosion/slides into pool area?		**X**				
c	Sediment accumulation? **Suspended FGD solids and fly ash settle in the impoundment.**			**X**			
d	Floating debris present? **Sparse debris on top of the impounded ash.**		**X**				
e	Depressions, sinkholes, or vortices?		**X**				
f	Low ridges/saddles allowing overflow?		**X**				
g	Structures below dam crest elevation? **Yes. See Comment ix.**			**X**	**X**		

Additional comments and recommendations:

i. APS is in the process of updating the Emergency Action Plan. The plan shall be posted to the public accessible website before April 17, 2017 to comply with the initial plan requirement of CFR 257.73.

ii. The water elevation marker near the Drop Inlet Riser (see photo IMG_1783) is covered in ash and is difficult to read. The ash should be washed off using a water truck to aid in recording the water elevation during the weekly inspections.

iii. The North Toe Buttress (NTB) was constructed as part of the 5280 Lift of the LAI to provide additional stability in the northern portion of the West Embankment (see photo IMG_1792). The NTB appeared to be in good condition during the inspection. The NTB foundation instruments are recorded on an interval not to exceed 30 days and indicate normal, expected foundation conditions.

iv. The Dead Pool Sump and internal toe drain system is a means of dewatering impounded ash within the LAI. It is drained by gravity and pumped up and discharged to the LDWP. Its operation is not a requirement for safe operation of the LAI but is encouraged because it assists with dewatering, consolidation, and strengthening the impounded solids. The system will operate as a U-shaped siphon without the pump that lifts the water up and over the embankment of the LDWP. Running this pump increases the efficiency of the toe drain system. At the time of inspection, the system was pressurized and the pump operational.

v. There appear to be a series of small depressions along the edge of the geomembrane liner anchor trench on the Northwest Embankment (see photo IMG_1806). Their cause should be monitored and assessed as to whether or not the anchor trench is properly compacted or if there is piping/internal erosion in this area.

vi. Two tears/holes were observed in the liner along the Northwest Embankment during the inspection, magnified by the presence of small shrubs taking root in the clay blanket (see photos IMG_1812 and IMG_1813). The shrubs should be removed and the liner should be repaired. The cause of the tears/holes should be investigated.

vii. A block of sandstone was observed sitting on top of the liner along the Northwest Embankment (see photo IMG_1814). The liner did not appear to be torn, but the block of sandstone should be removed, the area should be re-inspected, and necessary repairs should be made.

viii. There was minor erosion in the groin of the Northwest Embankment (see photo IMG_1946). Monitor and repair the erosion as soon as the erosion depth exceeds one foot.

ix. The primary outlet from the LAI to the LDWP is an 8-foot vertical, perforated HDPE riser connected at the bottom to 8-inch and 16-inch diameter HDPE gravity pipe outlets to the LDWP. The observations of the 2015 inspection included one that the 8-inch HDPE pipe appeared to be plugged. Observations at the riser structure in the LAI and at the pipe outlet at the LDWP during this inspection indicated that the pipe currently appears to be draining, but may still be partially clogged. APS will monitor the 8-inch pipe and determine if it should be cleaned at a later date.

x. The 7-day inspection reports for the period between October 15, 2015 and September 30, 2016 do not indicate that there were any appearances of actual or potential structural weakness or other conditions which have the potential to disrupt the operation or safety of the CCR unit.

4.2 APS FIELD INSPECTION – LINED DECANT WATER POND (LDWP)

<table>
<tr><td colspan="3">Lined Decant Water Pond (LDWP)</td><td colspan="2">State Identification Number (SID): D-635</td><td rowspan="15">Not Applicable</td><td rowspan="15">No</td><td rowspan="15">Yes</td><td rowspan="15">Monitor</td><td rowspan="15">Repair</td><td rowspan="15">Investigate</td></tr>
<tr><td>SID: D-635</td><td>Dam Name: Lined Decant Water Pond (LDWP)</td><td>Type: Zoned earth and ash fill with double-liner geomembrane and leak detection</td><td>Purpose: Store recycled LAI decant water and collected groundwater</td></tr>
<tr><td colspan="2">Contact(s): Byron Conrad, P.E. (APS)</td><td colspan="2">Report Date: January 13, 2017</td></tr>
<tr><td colspan="2">Inspected by: Byron Conrad, P.E. (APS), Cletis Mark (APS), Lee Wright, P.E. (AECOM)</td><td colspan="2">Inspection Date: October 18, 2016</td></tr>
<tr><td colspan="2">Reviewed by: Byron Conrad, P.E. (APS)</td><td colspan="2">Review Date: December 29, 2016</td></tr>
<tr><td colspan="2">Design Dam Crest Elevation (ft): 5,216</td><td colspan="2">Design Spillway Crest Elevation: No spillway</td></tr>
<tr><td colspan="2">Design Total Freeboard (ft): 2.8 (above the maximum surcharge level, EL 5213.2)</td><td colspan="2">Measured Total Freeboard (ft): 9.5 on day of inspection</td></tr>
<tr><td colspan="2">Statutory Dam Height (ft): 16</td><td colspan="2">Structural Height (ft): 16</td></tr>
<tr><td colspan="2">Dam Crest Length (ft): 5,488</td><td>Upstream Slope: 2:1</td><td>Downstream Slope: 1.5:1</td></tr>
<tr><td colspan="2" rowspan="2">Dam Crest Width (ft): 20</td><td>Lat: 36° 41' 00" (per NMOSE permit)</td><td rowspan="2">Water Rights: N/A</td></tr>
<tr><td>Long: 108° 30' 45" (per NMOSE permit)</td></tr>
<tr><td colspan="2">Reservoir Area (acres): 45.4 (at el. 5213.2 ft) per APS drawing 150793.2.1</td><td colspan="2">Reservoir Storage (ac-ft): 435 (normal operating capacity)</td></tr>
<tr><td colspan="4">Inflow Design Flood/Safe Flood-Passing Capacity: PMF – fully contained</td></tr>
<tr><td colspan="2">Reservoir Level During Inspection (ft): 5,206.5</td><td>Photos: Yes</td><td>Pages: 4</td></tr>
</table>

Lined Decant Water Pond (LDWP)			SID: **D-635**	N/A	No	Yes	Mon	Rep	Inv
COMPLIANCE CHECKLIST									
1	***CONDITION SUMMARY, LICENSE, EAP, NEXT INSPECTION***								
a	Recorded downstream hazard:	**Significant**	Should hazard be revised?		**X**				
b	If high hazard, estimate downstream persons-at-risk (PAR): **N/A**		Is there a significant increase since the last inspection?		**X**				
c	Recorded size:	**Intermediate**	Should size be revised?		**X**				
d	Any safety deficiencies?	**No**	Describe:		**X**				
e	Any statute or rule violations?	**No**	Describe and list required action:		**X**				
f	Safe storage level on License:	**5,213.2 feet**	Should level be revised:		**X**				
g	Any License violations?	**No**	Describe and list required action:		**X**				
h	Date of current License:	**February 7, 2008**	Should new License be issued?		**X**				
i	Date of last Emergency Action Plan revision: **12/2010**		Should EAP be revised? **See Comment i.**			**X**			
j	Any Agency actions?	**No**	Describe and list required action:		**X**				
k	Normal inspection frequency:	**Annually**	Should inspection frequency be revised?		**X**				
l	Recommended date for next inspection: **October 2017 for next annual inspection**								

MONITORING CHECKLIST									
2	***INSTRUMENTATION AND MONITORING***								
a	Describe:	**Instrumentation:** **1) Eight standpipe piezometers** **2) Two crest survey/settlement monuments.** **Other** **1) Interstitial geomembrane leak detection and evacuation pump.** **2) Surveyed level markings on geomembrane liner in southeast corner.** **3) No inflow measurement devices.** **4) Outflow estimation by LDWP pump rating/hours of operation, if needed.**						
b	Any repair or replacement required?	**Yes**	Describe: **Place the liner back in the anchor trench in the northwest corner. See Comment ii.**			**X**		**X**	
c	Date of last monitoring report:	**January 2016**	Should new readings be taken and new report provided? **Monthly measurement and annual reporting is required.**		**X**				

DAM EMBANKMENT CHECKLIST								
3	***DAM CREST***							
a	Settlements, slides, depressions?		**X**					
b	Misalignment?		**X**					
c	Longitudinal/Transverse cracking?		**X**					
d	Animal burrows?		**X**					
e	Adverse vegetation?		**X**					
f	Erosion?		**X**					
4	***UPSTREAM SLOPE***							
a	Erosion? **Upstream slope is covered by geomembrane.**		**X**					
b	Inadequate ground cover?		**X**					
c	Adverse vegetation?		**X**					
d	Longitudinal/Transverse cracking?	**X**						
e	Inadequate riprap?	**X**						
f	Stone deterioration?	**X**						
g	Settlements, slides, depressions, bulges? **A few depressions. The liner is also shoving up and sliding in several locations. See Comment ii.**			**X**				
h	Animal burrows?		**X**					

Lined Decant Water Pond (LDWP)		SID: **D-635**	N/A	No	Yes	Mon	Rep	Inv
5	***DOWNSTREAM SLOPE***							
a	Erosion?	**Minor rilling on the South and West Embankments. See Comment iii.**			**X**	**X**		
b	Inadequate ground cover?	**The LDWP West and South Embankment slopes are faced with bottom ash that supports only sporadic and uneven vegetation. A lime-based, white- and turquoise-colored dust suppression agent is applied in accordance with the Plant's Dust Control Plan.**		**X**				
c	Adverse vegetation?	**Occasional shrubs and other vegetation observed.**		**X**				
d	Longitudinal/Transverse cracking?			**X**				
e	Inadequate riprap?		**X**					
f	Stone deterioration?		**X**					
g	Settlements, slides, depressions, bulges?			**X**				
h	Soft spots or boggy areas?			**X**				
i	Movement at or beyond toe?			**X**				
j	Animal burrows?			**X**				
6	***ABUTMENT CONTACTS***							
a	Erosion?			**X**				
b	Differential movement?			**X**				
c	Cracks?			**X**				
d	Settlements, slides, depressions, bulges?			**X**				
e	Seepage?			**X**				
f	Animal burrows?			**X**				
7	***SEEPAGE/PIPING CONTROL DESIGN FEATURE(S)***							
a	Describe:	**All pumps and pumping systems appeared to be functioning at the time of the inspection.**		**X**				
b	Internal drains flowing?				**X**			
c	Seepage at or beyond toe?			**X**				
d	If so, does seepage contain fines?		**X**					
e	Evidence of sand boils at or beyond toe?			**X**				

RESERVOIR CHECKLIST								
8	***RESERVOIR***							
a	High water marks?			**X**				
b	Erosion/slides into pool area?	**Several areas of accumulated bottom ash on reservoir side slopes.**		**X**				
c	Sediment accumulation?	**Minor amounts of suspended FGD solids and fly ash may settle in the impoundment.**			**X**			
d	Floating debris present?				**X**			
e	Depressions, sinkholes, or vortices?			**X**				
f	Low ridges/saddles allowing overflow?			**X**				
g	Structures below dam crest elevation?	**The interstitial geomembrane leak detection and evacuation pump system includes a pump situated between the two geomembrane liners. See Comment iv.**			**X**			

Additional comments and recommendations:

i. APS is in the process of updating the Emergency Action Plan before April 17, 2017 to comply with the initial plan requirement of CFR 257.73.

ii. The liner in an area of the northern portion of the West Embankment is pulling out of the anchor trench (see photo IMG_1815).

iii. The external slopes of the embankments show evidence of minor erosion rilling (see photo IMG_1889). APS has been maintaining affected areas by regrading and recompacting eroded areas (see photo IMG_1914). At the time of the inspection, several locations along the South Embankment had recently been repaired. The current program appears to be sufficient and should be continued such that rills are repaired if the erosion depth exceeds one foot.

iv. The LDWP interstitial geomembrane leak detection and evacuation pump was operating at the time of inspection (see photo IMG_1891). Prior investigations indicated that the primary large-diameter access port was blocked and that the type of commercially-available submersible pumps that can be inserted into the secondary small-diameter access port do not last for more than a couple of months in these operating conditions. APS later determined that regularly replacing the pump is more economical and feasible than the other identified alternative, temporarily decommissioning the entire pond and constructing a different access port configuration. Because the pump will be replaced on a regular basis, the Plant should continue to monitor the system for signs the pump has, or is about to, break down.

v. The 7-day inspection reports for the period between October 15, 2015 and September 30, 2016 indicate the following:

    a. Erosion was observed on October 29, 2015. The erosion was extensive enough to require repair and a Corrective Action Request was submitted. The area was regraded and recompacted using a sheepsfoot attachment on a backhoe prior to the next inspection.

vi. In general, the weekly inspection reports do not indicate that there were any appearances of actual or potential structural weakness or other conditions which have the potential to disrupt the operation or safety of the CCR unit.

4.3 APS FIELD INSPECTION – COMBINED WASTE TREATMENT POND (CWTP)

<table>
<tr><td colspan="3">Combined Waste Treatment Pond (CWTP)</td><td colspan="3">State Identification Number (SID): N/A</td></tr>
<tr><td>SID: N/A</td><td>Dam Name: Combined Waste Treatment Pond (CWTP)</td><td>Type: Earth</td><td>Purpose: CCR-impacted surface water collection</td><td rowspan="15">Not Applicable
No
Yes
Monitor
Repair
Investigate</td></tr>
<tr><td colspan="2">Contact(s): Byron Conrad, P.E. (APS)</td><td colspan="2">Report Date: January 13, 2017</td></tr>
<tr><td colspan="2">Inspected by: Byron Conrad, P.E. (APS), Cletis Mark (APS), Lee Wright, P.E. (AECOM)</td><td colspan="2">Inspection Date: October 17, 2016</td></tr>
<tr><td colspan="2">Reviewed by: Byron Conrad, P.E. (APS)</td><td colspan="2">Review Date: December 29, 2016</td></tr>
<tr><td colspan="2">Design Dam Crest Elevation (ft): 5,335</td><td colspan="2">Design Spillway Crest Elevation (ft): 5,328.77</td></tr>
<tr><td colspan="2">Design Total Freeboard (ft): 7</td><td colspan="2">Measured Total Freeboard (ft): Not measured</td></tr>
<tr><td colspan="2">Statutory Dam Height (ft): 32 (max), 22.81 (avg)</td><td colspan="2">Structural Height (ft): 32 (max), 22.81 (avg)</td></tr>
<tr><td colspan="2">Dam Crest Length (ft): 1,800</td><td>Upstream Slope: 2:1</td><td>Downstream Slope: 1.5:1</td></tr>
<tr><td colspan="2" rowspan="2">Dam Crest Width (ft): 24-30</td><td>Lat: 34° 41′ 29.19″N</td><td rowspan="2">Water Rights: N/A</td></tr>
<tr><td>Long: 108° 28′ 28.73″W</td></tr>
<tr><td colspan="2">Reservoir Area (acres): 13.7</td><td colspan="2">Reservoir Storage (ac-ft): 137</td></tr>
<tr><td colspan="4">Inflow Design Flood/Safe Flood-Passing Capacity: Not Calculated</td></tr>
<tr><td colspan="2">Reservoir Level During Inspection (ft): 5,328.77 (water was passing through the spillway)</td><td>Photos: Yes</td><td>Pages: 4</td></tr>
</table>

Combined Waste Treatment Pond (CWTP)		SID: **N/A**	N/A	No	Yes	Mon	Rep	Inv
	COMPLIANCE CHECKLIST							
1	***CONDITION SUMMARY, LICENSE, EAP, NEXT INSPECTION***							
a	Recorded downstream hazard: **Low**	Should hazard be revised?		**X**				
b	If high hazard, estimate downstream persons-at-risk (PAR): **N/A**	Is there a significant increase since the last inspection?		**X**				
c	Recorded size: **Small**	Should size be revised?		**X**				
d	Any safety deficiencies? **No**	Describe:		**X**				
e	Any statute or rule violations? **No**	Describe and list required action:		**X**				
f	Safe storage level on License: **N/A**	Should level be revised:		**X**				
g	Any License violations? **No**	Describe and list required action:		**X**				
h	Date of current License: **N/A**	Should new License be issued?		**X**				
i	Date of last Emergency Action Plan revision: **N/A**	Should EAP be revised?		**X**				
j	Any Agency actions? **No**	Describe and list required action:		**X**				
k	Normal inspection frequency: **Annually**	Should inspection frequency be revised?		**X**				
l	Recommended date for next inspection: **October 2017**							

	MONITORING CHECKLIST							
2	***INSTRUMENTATION AND MONITORING***							
a	Describe: **There are four monitoring wells for this structure to comply with groundwater monitoring requirements.**							
b	Any repair or replacement required? **N/A**	Describe: **N/A**		**X**				
c	Date of last monitoring report: **January 2016**	Should new readings be taken and new report provided? **Annual reporting is required.**			**X**			

	DAM EMBANKMENT CHECKLIST							
3	***DAM CREST***							
a	Settlements, slides, depressions?	**The crest appeared to be flat (with a slight grade to the upstream side) and in good condition.**		**X**				
b	Misalignment?			**X**				
c	Longitudinal/Transverse cracking?			**X**				
d	Animal burrows?	**None observed. The road is graded regularly. Continue to monitor.**		**X**		**X**		
e	Adverse vegetation?	**None observed. The road is graded regularly. See Comment i.**		**X**				
f	Erosion?			**X**				
4	***UPSTREAM SLOPE***							
a	Erosion?				**X**			
b	Inadequate ground cover?			**X**				
c	Adverse vegetation?	**There is very little vegetation on the slope. See Comment i.**		**X**				
d	Longitudinal/Transverse cracking?			**X**				
e	Inadequate riprap?				**X**			
f	Stone deterioration?		**X**					
g	Settlements, slides, depressions, bulges?			**X**				
h	Animal burrows?	**None observed. Continue to monitor.**		**X**		**X**		

Combined Waste Treatment Pond (CWTP)		SID: **N/A**	N/A	No	Yes	Mon	Rep	Inv
5	***DOWNSTREAM SLOPE***							
a	Erosion?	**The water level is approximately 6 feet below the embankment (by visual observation) and the original 2:1 slope is approximately 1.5:1.**			**X**	**X**	**X**	
b	Inadequate ground cover?				**X**		**X**	
c	Adverse vegetation?			**X**				
d	Longitudinal/Transverse cracking?			**X**				
e	Inadequate riprap?	**See Comment ii.**			**X**		**X**	
f	Stone deterioration?		**X**					
g	Settlements, slides, depressions, bulges?	**A few instances of isolated, irregular slopes. See Comment iii.**			**X**	**X**		
h	Soft spots or boggy areas?			**X**				
i	Movement at or beyond toe?	**Cannot observe.**	**X**					
j	Animal burrows?	**None observed. Continue to monitor.**		**X**		**X**		
6	***ABUTMENT CONTACTS***							
a	Erosion?			**X**				
b	Differential movement?			**X**				
c	Cracks?			**X**				
d	Settlements, slides, depressions, bulges?			**X**				
e	Seepage?			**X**				
f	Animal burrows?	**None observed. Continue to monitor.**		**X**		**X**		
7	***SEEPAGE/PIPING CONTROL DESIGN FEATURE(S)***							
a	Describe:	**None.**						
b	Internal drains flowing?		**X**					
c	Seepage at or beyond toe?	**Cannot observe.**	**X**					
d	If so, does seepage contain fines?		**X**					
e	Evidence of sand boils at or beyond toe?		**X**					

RESERVOIR CHECKLIST								
8	***RESERVOIR***							
a	High water marks?				**X**			
b	Erosion/slides into pool area?			**X**				
c	Sediment accumulation?	**See Comment v.**			**X**			
d	Floating debris present?			**X**				
e	Depressions, sinkholes, or vortices?			**X**				
f	Low ridges/saddles allowing overflow?			**X**				
g	Structures below dam crest elevation?	**Twin 30-inch reinforced concrete pipe outlets are located at the eastern side of the CWTP.**			**X**			

Additional comments and recommendations:

i. No vegetation (trees and shrubs) was observed on the crest or slopes during this inspection (see photos IMG_1480 and IMG_1506). Trees and shrubs observed on the downstream slope in the 2015 inspection have been removed. Continue removing vegetation in accordance with the NMOSE vegetation maintenance guidelines "*Vegetation Management on Dams*" (2011).

ii. The downstream slope does not have riprap protection above the water line (see photos IMG_1475 and IMG_1480). APS is in the process of procuring riprap to provide additional protection for the downstream slope.

iii. There appeared to be an over-steepened area in the upstream slope along the northern (east-west) section of the embankment (see photo IMG_1506). This area was heavily vegetated during the 2015 inspection and the irregular slope may have been caused by the vegetation removal activities. APS will monitor the flow in the discharge canal for erosive velocities until riprap is replaced on the slope.

iv. The upstream slope of the CWTP appeared to have been regraded after vegetation removal activities (see photo IMG_1508). The slope appeared to be irregular, but in otherwise adequate condition.

v. The facility includes seven decant cells in the western half of the CWTP. Flow from the collection distribution vault is directed to the selected cells. Settled solids are periodically removed and decanted water flows to the CWTP free water pond. Suspended sediment and CCR settle in the impoundment.

vi. The 7-day inspection reports for the period between October 15, 2015 and September 30, 2016 indicate the following:

    a. The inspector noted vegetation was present on the downstream slope in October 2015 (this vegetation was also noted in the 2015 Annual Inspection Report). The vegetation was removed by mid-December 2015.

    b. The inspector noted vegetation was present on the upstream and downstream slopes in August 2016. The vegetation was removed prior to the next inspection.

vii. In general, the weekly inspection reports do not indicate that there were any appearances of actual or potential structural weakness or other conditions which have the potential to disrupt the operation or safety of the CCR unit.

4.4 APS FIELD INSPECTION – UPPER RETENTION SUMP

<table>
<tr><td colspan="2">Upper Retention Sump</td><td colspan="3">State Identification Number (SID): N/A</td><td rowspan="15">Not Applicable</td><td rowspan="15">No</td><td rowspan="15">Yes</td><td rowspan="15">Monitor</td><td rowspan="15">Repair</td><td rowspan="15">Investigate</td></tr>
<tr><td>SID: N/A</td><td>Dam Name: Upper Retention Sump</td><td>Type: Incised</td><td>Purpose: CCR-impacted surface water collection</td></tr>
<tr><td colspan="2">Contact(s): Byron Conrad, P.E. (APS)</td><td colspan="2">Report Date: January 13, 2017</td></tr>
<tr><td colspan="2">Inspected by: Byron Conrad, P.E. (APS), Cletis Mark (APS), Lee Wright, P.E. (AECOM)</td><td colspan="2">Inspection Date: October 17, 2016</td></tr>
<tr><td colspan="2">Reviewed by: Byron Conrad, P.E. (APS)</td><td colspan="2">Review Date: December 28, 2016</td></tr>
<tr><td colspan="2">Design Dam Crest Elevation (ft): 5,350.5</td><td colspan="2">Design Spillway Crest Elevation: None</td></tr>
<tr><td colspan="2">Design Total Freeboard (ft): 6.5</td><td colspan="2">Measured Total Freeboard (ft): Not measured</td></tr>
<tr><td colspan="2">Statutory Dam Height (ft): 0 (incised)</td><td colspan="2">Structural Height (ft): 0 (incised)</td></tr>
<tr><td colspan="2">Dam Crest Length (ft): 900 (approx.)</td><td>Upstream Slope: 2:1</td><td>Downstream Slope: N/A</td></tr>
<tr><td colspan="2" rowspan="2">Dam Crest Width (ft): Varies</td><td>Lat: 36°41'14.26"N</td><td rowspan="2">Water Rights: N/A</td></tr>
<tr><td>Long: 108°28'37.91"W</td></tr>
<tr><td colspan="2">Reservoir Area (acres): 1.07</td><td colspan="2">Reservoir Storage (ac-ft): 10.7</td></tr>
<tr><td colspan="4">Inflow Design Flood/Safe Flood-Passing Capacity: Not Calculated</td></tr>
<tr><td colspan="2">Reservoir Level During Inspection (ft): Approx. 5,345 (by observation)</td><td>Photos: Yes</td><td>Pages: 4</td></tr>
</table>

Upper Retention Sump			SID: **N/A**	N/A	No	Yes	Mon	Rep	Inv
COMPLIANCE CHECKLIST									
1	***CONDITION SUMMARY, LICENSE, EAP, NEXT INSPECTION***								
a	Recorded downstream hazard:	**Very Low**	Should hazard be revised?		**X**				
b	If high hazard, estimate downstream persons-at-risk (PAR): **N/A**		Is there a significant increase since the last inspection?		**X**				
c	Recorded size:	**Small**	Should size be revised?		**X**				
d	Any safety deficiencies?	**No**	Describe:		**X**				
e	Any statute or rule violations?	**No**	Describe and list required action:		**X**				
f	Safe storage level on License:	**N/A**	Should level be revised:		**X**				
g	Any License violations?	**No**	Describe and list required action:		**X**				
h	Date of current License:	**N/A**	Should new License be issued?		**X**				
i	Date of last Emergency Action Plan revision: **N/A**		Should EAP be revised?		**X**				
j	Any Agency actions?	**No**	Describe and list required action:		**X**				
k	Normal inspection frequency:	**Annually**	Should inspection frequency be revised?		**X**				
l	Recommended date for next inspection:	**October 2017**							

MONITORING CHECKLIST									
2	***INSTRUMENTATION AND MONITORING***								
a	Describe:	**There are no instruments or other monitoring devices for this structure due to its small size.**							
b	Any repair or replacement required? **N/A**		Describe: **N/A**		**X**				
c	Date of last monitoring report:	**January 2016**	Should new readings be taken and new report provided? **N/A**		**X**				

DAM EMBANKMENT CHECKLIST									
3	***DAM CREST***								
a	Settlements, slides, depressions?				**X**				
b	Misalignment?				**X**				
c	Longitudinal/Transverse cracking?				**X**				
d	Animal burrows?	**None observed. Continue to monitor.**			**X**		**X**		
e	Adverse vegetation?	**The tumbleweeds accumulated on the north side of the structure do not appear to be negatively impacting the safe operation of the unit.**			**X**				
f	Erosion?				**X**				
4	***UPSTREAM SLOPE***								
a	Erosion?	**See Comment i.**				**X**	**X**		
b	Inadequate ground cover?	**The upstream slope is lined with 18 inches of compacted soil cement.**			**X**				
c	Adverse vegetation?	**Minor vegetation on the west upstream slope.**			**X**				
d	Longitudinal/Transverse cracking?				**X**				
e	Inadequate riprap?				**X**				
f	Stone deterioration?	**Occasional cracks in the soil cement facing.**				**X**			
g	Settlements, slides, depressions, bulges?	**See Comment ii.**				**X**	**X**		
h	Animal burrows?	**None observed. Continue to monitor.**			**X**		**X**		

Upper Retention Sump		SID: **N/A**	N/A	No	Yes	Mon	Rep	Inv
5	***DOWNSTREAM SLOPE***							
a	Erosion?	**There is no downstream slope.**	**X**					
b	Inadequate ground cover?		**X**					
c	Adverse vegetation?		**X**					
d	Longitudinal/Transverse cracking?		**X**					
e	Inadequate riprap?		**X**					
f	Stone deterioration?		**X**					
g	Settlements, slides, depressions, bulges?		**X**					
h	Soft spots or boggy areas?		**X**					
i	Movement at or beyond toe?		**X**					
j	Animal burrows?		**X**					
6	***ABUTMENT CONTACTS***							
a	Erosion?	**There are no abutments for the incised CCR Unit.**	**X**					
b	Differential movement?		**X**					
c	Cracks?		**X**					
d	Settlements, slides, depressions, bulges?		**X**					
e	Seepage?		**X**					
f	Animal burrows?		**X**					
7	***SEEPAGE/PIPING CONTROL DESIGN FEATURE(S)***							
a	Describe:	**None.**						
b	Internal drains flowing?		**X**					
c	Seepage at or beyond toe?	**There is no downstream toe.**	**X**					
d	If so, does seepage contain fines?		**X**					
e	Evidence of sand boils at or beyond toe?		**X**					

RESERVOIR CHECKLIST								
8	***RESERVOIR***							
a	High water marks?				**X**			
b	Erosion/slides into pool area?	**A few pieces of broken concrete are present in the reservoir.**			**X**			
c	Sediment accumulation?	**Suspended sediment and FGD solids settle in the reservoir. The reservoir is periodically dewatered and the sediment and solids are removed.**			**X**			
d	Floating debris present?	**Sparse floating debris was observed.**			**X**			
e	Depressions, sinkholes, or vortices?			**X**				
f	Low ridges/saddles allowing overflow?			**X**				
g	Structures below dam crest elevation?	**Yes. There is an evacuation pump system, pump chamber, and at least two reinforced concrete inlet pipes. The evacuation pump system discharges to above-ground lines.**			**X**			

Additional comments and recommendations:

i. Minor erosion noted due to surface water inflow at the northeast corner of the unit. Monitor this area and compare during the next annual inspection. The erosion in the northeast corner of the Upper Retention Sump (see photo IMG_1428) does not appear to have worsened.

ii. The current pond level allowed a visual inspection of the concrete access ramp along the North Embankment. There was a noticeable degree of undermining beneath the ramp (see photo IMG_1447). Consider repairing this area.

iii. APS is currently cleaning the canal to the west of the Upper Retention Sump (see photo IMG_1467). The canal was clogged at the time of the inspection, as was the drain pipe between the canal and the Upper Retention Sump. The Upper Retention Sump reservoir had recently been cleaned out.

iv. Accumulated solids in the Upper Retention Sump are periodically removed after dewatering the pond with excavation and haulage equipment. There is an access ramp in the northwest corner of the Upper Retention Sump (see photo IMG_1447).

v. The 7-day inspection reports for the period between October 15, 2015 and September 30, 2016 indicate the following:

    a. Erosion was observed on January 6, 2016. The extent of the erosion was minor and required monitoring.

    b. The water and solids levels increased by February 29, 2016 and were noted as requiring monitoring. The water and solids level decreased by March 10, 2016.

    c. The water and solids levels increased by April 28, 2016 and were noted as requiring monitoring. The water and solids level decreased by May 5, 2016.

vi. In general, the weekly inspection reports do not indicate that there were any appearances of actual or potential structural weakness or other conditions which have the potential to disrupt the operation or safety of the CCR unit.

4.5 APS FIELD INSPECTION – DRY FLY ASH DISPOSAL AREA (DFADA)

<table>
<tr><td colspan="2">Dry Fly Ash Disposal Area (DFADA)</td><td colspan="2">State Identification Number (SID): N/A</td><td rowspan="12">Not Applicable</td><td rowspan="12">No</td><td rowspan="12">Yes</td><td rowspan="12">Monitor</td><td rowspan="12">Repair</td><td rowspan="12">Investigate</td></tr>
<tr><td>SID: N/A</td><td>Landfill Name: Dry Fly Ash Disposal Area (Cells 1, 2, and 3)</td><td>Type: Lined Landfill</td><td>Purpose: Permanent storage of dry CCR (fly ash, bottom ash, dry FGD solids) and select construction debris (e.g. concrete and wood)</td></tr>
<tr><td colspan="2">Contact(s): Byron Conrad, P.E. (APS)</td><td colspan="2">Report Date: January 13, 2017</td></tr>
<tr><td colspan="2">Inspected by: Byron Conrad, P.E. (APS), Cletis Mark (APS), Lee Wright, P.E. (AECOM)</td><td colspan="2">Inspection Date: October 17, 2016</td></tr>
<tr><td colspan="2">Reviewed by: Byron Conrad, P.E. (APS)</td><td colspan="2">Review Date: December 28, 2016</td></tr>
<tr><td colspan="2">Design Maximum Ash Elevation (ft): 5,295</td><td colspan="2">Current Ash Elevation (ft):
Based on an October 2016 survey from FHI:
Cell 1 is ~ EL 5278 feet
Cell 2 is ~ EL 5262 feet
Cell 3 is ~ EL 5220 feet (in the center of the Cell).</td></tr>
<tr><td colspan="2">Dam Crest Length (ft): Not applicable</td><td>Design Side Slope:
Varies. 4:1 on final outside slopes, 2:1 on internal slopes.</td><td>Observed Side Slope:
Varies. 4:1 on final outside slopes, 2:1 on internal slopes.</td></tr>
<tr><td colspan="2" rowspan="2">Dam Crest Width (ft): Not applicable</td><td>Lat: 36°40'43.27"N</td><td rowspan="2">Water Rights: N/A</td></tr>
<tr><td>Long: 108°30'12.2 W</td></tr>
<tr><td colspan="2">Landfill Area (acres): 94.8 (Current, Cells 1, 2, and 3)</td><td colspan="2">Landfill Capacity (ac-ft): 6,261 for Cells 1, 2, and 3</td></tr>
<tr><td colspan="4">Inflow Design Flood/Safe Flood-Passing Capacity: Diversion of 100-year, 24-hour run-on storm. Storage of impacted run-off from 25-year, 24 hour storm, spillway passage of impacted run-off from 100-year, 24-hour storm.</td></tr>
<tr><td colspan="2">Photos: Yes</td><td colspan="2">Pages: 3</td></tr>
</table>

Dry Fly Ash Disposal Area (DFADA)		SID: **N/A**						
			N/A	No	Yes	Mon	Rep	Inv
MONITORING CHECKLIST								
1	***INSTRUMENTATION AND MONITORING***							
a	Describe:	**There are no instruments or other monitoring devices for this structure.**						
b	Any repair or replacement required? **N/A**	Describe: **N/A**		**X**				
c	Date of last monitoring report: **January 2016**	Should new readings be taken and new report provided? **N/A**		**X**				
2	***CONDITION SUMMARY***							
a	Waste placed in good practices?				**X**			
3	***LANDFILL CONFIGURATION***							
a	Settlements, slides, slope stability? **No, none apparent**			**X**				
b	Cracking? **No, none apparent**			**X**				
c	Run on control?				**X**	**X**	**X**	
d	Run off control?				**X**			
e	Erosion?			**X**		**X**		
f	Dust control issues?				**X**	**X**		

Additional comments and recommendations:

i. There is evidence of head-cutting at the inlet to the Storm Water Diversion Channel (see photo IMG_1614). The affected area appears to have expanded compared to the 2015 observation. Sediment is also accumulating in the adjacent detention basin. Re-evaluate the channel performance of the inlet to understand if the drainage pattern has changed or whether additional erosion control measures should be applied.

ii. The eastern slope of Cell 2 appears to be graded to an approximate 5H:1V or 6H:1V (horizontal : vertical) slope angle (see photo IMG_1620). Internal slopes are approximately 2H:1V. At the time of the inspection, Cell 1 was at a higher elevation than Cell 2 and CCR solids (ash) were being placed in Cell 3 (see photo IMG_0095).

iii. Ash placement and compaction at the DFADA is in accordance with a method specification. Ash is deposited in 6-inch thick lifts (maximum) using end dumps and then compacted by a tractor-pulled smooth, static drum. CCR solids appeared to be placed in accordance with the method specification.

iv. Run on control – The run on control system consists of a detention basin and diversion ditch to direct storm water around the DFADA. In addition to the head-cutting at the inlet, there was also significant (approximately 5 feet deep) erosion at the outlet south of Cell 1 (see photo IMG_1637) and sediment accumulation upstream of the outlet (see photo IMG_1628). The run on control system otherwise appears to be in good condition and the absence of excessive erosion at the toe of Cells 1 and 2 indicates that the run on control system is still functioning as intended.

v. Run off control – There are no external runoff collection ditches. Internal drain systems report to two separate lined leachate cell collection ponds for Cells 1 and 2 (see photo IMG_1754). Cell 3 drains to the Cell 1 collection pond. The ponds are drained by a mobile suction pump and water is used for dust control in approved locations. The system appeared to be operating and functioning as designed.

vi. There is damage to the geomembrane lining the crest of the Cell 1 collection pond (see photo IMG_1664). The tear is approximately 12 inches long and the adjacent dent is several feet long. Investigate the cause and repair the tear.

vii. Several plants were observed to have taken root through holes in the Pyramat geosynthetic covering along the west side of Cell 1 (see photo IMG_0108).

viii. Minor dust control issues were observed during the inspection (see photo IMG_1690). APS addressed these issues with the ash haul subcontractor later that day.

ix. The 7-day inspection reports for the period between October 15, 2015 and September 30, 2016 do not indicate that there were any appearances of actual or potential structural weakness or other conditions which have the potential to disrupt the operation or safety of the CCR unit.

5.0 DATA REVIEW

5.1 LINED ASH IMPOUNDMENT

5.1.1 Geometry Changes Since Last Inspection

There have not been any significant changes to the geometry of the unit since the last inspection in 2015.

5.1.2 Instrumentation

The location of geotechnical and other related instrumentation in the vicinity of the LAI are shown on Figure 6 – Lined Ash Impoundment (LAI) Instrumentation Map.

The minimum and maximum recorded readings for each instrument over the October 1, 2015 – September 30, 2016 (current) review period are reported in the following table:

Instrument Name	Minimum	Maximum	Unit
LAI Piezometers (10/1/15 to 9/30/16)			
P-7.1	5196.87[1]	5196.87[1]	elevation head
P-7.2	5191.35[1]	5191.35[1]	elevation head
P-7.3	5184.75[1]	5184.75[1]	elevation head
P-8.1	5196.60[1]	5196.60[1]	elevation head
P-8.2	5182.10[1]	5182.10[1]	elevation head
P-8.3	5174.10[1]	5174.10[1]	elevation head
P-9.1	5196.87[1]	5196.87[1]	elevation head
P-9.2	5183.97[1]	5183.97[1]	elevation head
P-9.3	5170.87[1]	5170.87[1]	elevation head
P-10.1	5198.22[1]	5198.22[1]	elevation head
P-10.2	5184.22[1]	5184.22[1]	elevation head
P-10.3	5173.72[1]	5173.72[1]	elevation head
P-11.1	5200.72	5201.66	elevation head
P-11.2	5189.65[1]	5189.65[1]	elevation head
P-11.3	5174.65[1]	5174.65[1]	elevation head
P-12.1	5202.54[1]	5202.54[1]	elevation head
P-12.2	5186.54[1]	5186.54[1]	elevation head
P-12.3	5176.54[1]	5176.64	elevation head
[1] Porewater pressure measurements are negative (draining condition)			

Instrument Name	Minimum	Maximum	Unit
NTB Piezometers (10/1/15 to 9/30/16)			
P-100.1	5202.06[1]	5202.06[1]	elevation head
P-100.2	5190.06[1]	5190.19	elevation head
P-100.3	5183.23[1]	5183.23[1]	elevation head
P-101.1	5185.93[1]	5185.93[1]	elevation head
P-101.2	5184.12	5184.73	elevation head
P-101.3	5174.21	5176.00	elevation head
P-102.1	5188.85[1]	5188.85[1]	elevation head
P-102.2	5174.60[1]	5175.13	elevation head
P-102.3	5169.58	5171.00	elevation head
P-103.1	5185.91[1]	5185.91[1]	elevation head
P-103.2	5170.91[1]	5170.91[1]	elevation head
P-103.3	5161.59	5161.89	elevation head
P-104.1	5198.72[1]	5198.72[1]	elevation head
P-104.2	5185.47[1]	5185.47[1]	elevation head
P-104.3	5178.47[1]	5178.47[1]	elevation head
P-105.1	5184.82[1]	5185.00	elevation head
P-105.2	5174.16[1]	5174.16[1]	elevation head
P-105.3	5163.18	5164.53	elevation head
P-106.1	5186.09[1]	5186.09[1]	elevation head
P-106.2	5165.51[1]	5165.51[1]	elevation head
P-106.3	5159.54	5160.90	elevation head
P-107.1	5197.27[1]	5197.67	elevation head
P-107.3	5173.44[1]	5173.44[1]	elevation head
P-108.1	5184.26[1]	5184.26[1]	elevation head
P-108.2	5173.59[1]	5174.48	elevation head
P-108.3	5175.00	5176.70	elevation head
P-109.1	5188.76[1]	5188.76[1]	elevation head
P-109.2	5172.51[1]	5172.51[1]	elevation head
P-109.3	5165.80	5166.84	elevation head
P-110.1	5184.28[1]	5184.66	elevation head
P-110.2	5171.86[1]	5171.86[1]	elevation head
P-110.3	5163.44[1]	5163.44[1]	elevation head
P-111.1	5187.29[1]	5187.57	elevation head
P-111.2	5172.33[1]	5172.33[1]	elevation head
P-111.3	5160.85	5161.09	elevation head
[1] Porewater pressure measurements are negative (draining condition)			

Instrument Name	Minimum	Maximum	Unit
Survey Monuments (10/1/15 to 9/30/16)			
SM7	5215.869	5215.939	EL (ft)
SM9	5217.084	5217.151	EL (ft)
Settlement Rods (10/1/15 to 9/30/16)			
SR-7	5250.766	5250.908	EL (ft)
SR-8	5256.119	5256.354	EL (ft)
SR-9	5248.617	5248.727	EL (ft)
SR-10	5248.851	5248.975	EL (ft)
SR-100	5222.215	5222.389	EL (ft)
SR-101	5205.446	5205.582	EL (ft)
SR-102	5205.251	5205.383	EL (ft)
SR-104	5219.321	5219.396	EL (ft)
SR-105	5204.971	5205.139	EL (ft)
SR-106	5205.301	5205.391	EL (ft)
SR-109	5206.478	5206.589	EL (ft)
SR-110	5205.806	5205.869	EL (ft)
Inclinometers (10/1/15 to 9/30/16)			
I-1	0	0.1746	in
I-2	0	0.1668	in
I-103	0	0.1152	in
I-107	0	0.1248	in
I-111	0	0.0858	in
Open Standpipe Piezometers (10/1/15 to 9/30/16)			
P-23	5157.15	5157.44	Elevation head
P-24	Dry	Dry	
P-25	Dry	Dry	

The data for the piezometers over the current review period indicate no significant elevation changes or trends related to the performance of the dam.

The data for the settlement rods and inclinometers over the current review period indicate no significant elevation changes or trends related to the performance of the dam.

5.1.3 CCR and Water Elevations

The depth of CCR in the LAI at the time of the inspection was approximately 67.25 feet, which corresponds to an elevation of 5272.25 feet.

5.1.4 Storage Capacity

The estimated remaining maximum storage capacity of the LAI at the time of the inspection was 372.18 acre-feet (ac-ft).

5.1.5 Approximate Impounded Volume at Time of Inspection

The approximate volume of impounded CCR in the LAI at the time of the inspection was 4,999.36 ac-ft.

5.1.6 Structural Weakness or Operational Change/Disruption

No conditions associated with structural weakness were identified during the field inspection.

No conditions that are or could be disruptive to the operation and safety of the CCR unit and appurtenant structures were identified during the field inspection.

There are no significant changes to the structural integrity or operation of the dam since the 2015 inspection.

5.2 LINED DECANT WATER POND

5.2.1 Geometry Changes Since Last Inspection

There have not been any significant changes to the geometry of the unit since the last inspection in 2015.

5.2.2 Instrumentation

The location of geotechnical and other related instrumentation in the vicinity of the LDWP are shown on Figure 7 – Lined Decant Water Pond (LDWP) Instrumentation Map.

The minimum and maximum recorded readings for each instrument over the October 1, 2015 – September 30, 2016 (current) review period are reported in the following table:

Instrument Name	Minimum	Maximum	Unit
Survey Monuments (10/1/15 to 9/30/16)			
SM7	5215.869	5215.939	EL (ft)
SM9	5217.084	5217.151	EL (ft)
Open Standpipe Piezometers (10/1/15 to 9/30/16)			
P-18	Dry	Dry	
P-19	Dry	Dry	
P-20	Dry	Dry	
P-21	Dry	Dry	
P-22	Dry	Dry	
P-23	5157.15	5157.44	Elevation head
P-24	Dry	Dry	
P-25	Dry	Dry	

The data for the survey monuments over the current review period indicate no significant elevation changes or trends related to the performance of the dam.

The data for the piezometers over the current review period indicate no significant elevation changes or trends related to the performance of the dam.

5.2.3 CCR and Water Elevations

The depth of water in the LDWP at the time of the inspection was 7.5 feet, which corresponds to a water surface elevation of 5206.5 feet. The LDWP does not impound a significant quantity of solids.

5.2.4 Storage Capacity

The estimated maximum remaining storage capacity of the LDWP at the time of the inspection was approximately 375 ac-ft.

5.2.5 Approximate Impounded Volume at Time of Inspection

The approximate volume of impounded water in the LDWP at the time of the inspection was 142 ac-ft.

5.2.6 Structural Weakness or Operational Change/Disruption

No conditions associated with structural weakness were identified during the field inspection.

No conditions that are or could be disruptive to the operation and safety of the CCR unit and appurtenant structures were identified during the field inspection.

There are no significant changes to the structural integrity or operation of the dam since the 2015 inspection.

5.3 COMBINED WASTE TREATMENT POND

5.3.1 Geometry Changes Since Last Inspection

There have not been any significant changes to the geometry of the unit since the last inspection in 2015.

5.3.2 Instrumentation

There are no instruments associated with the CWTP.

5.3.3 CCR and Water Elevations

The depth to water in the CWTP at the time of the inspection was observed to be approximately 6 feet, which corresponds to a water surface elevation of approximately 5328.77 feet (water was observed to be flowing over the spillway crest). The solids captured in the CWTP are removed by long reach excavator or dredged as needed.

5.3.4 Storage Capacity

The estimated maximum remaining storage capacity of the CWTP at the time of the inspection was 21.4 ac-ft.

5.3.5 Approximate Impounded Volume at Time of Inspection

The approximate volume of impounded water in the CWTP at the time of the inspection was 115.6 ac-ft.

5.3.6 Structural Weakness or Operational Change/Disruption

No conditions associated with structural weakness were identified during the field inspection.

The field inspection identified a lack of downstream armoring and oversteepened downstream slopes along the embankment. APS is currently in the process of addressing these issues.

There are no significant changes to the structural integrity or operation of the dam since the 2015 inspection.

5.4 UPPER RETENTION SUMP

5.4.1 Geometry Changes Since Last Inspection

There have not been any significant changes to the geometry of the unit since the last inspection in 2015.

5.4.2 Instrumentation

There are no instruments associated with the Upper Retention Sump.

5.4.3 CCR and Water Elevations

The depth of water in the Upper Retention Sump at the time of the inspection was approximately 6.5 feet, which corresponds to a water surface elevation of approximately 5345.5 feet. Sediment can accumulate in the Upper Retention Sump and is removed when required by earthwork equipment. The depth and quantity of solids could not be estimated during the inspection.

5.4.4 Storage Capacity

The estimated maximum remaining storage capacity of the Upper Retention Sump at the time of the inspection was 6.3 ac-ft.

5.4.5 Approximate Impounded Volume at Time of Inspection

The approximate volume of impounded water in the Upper Retention Sump at the time of the inspection was 4.4 ac-ft.

5.4.6 Structural Weakness or Operational Change/Disruption

No conditions associated with structural weakness were identified during the field inspection.

No conditions that are or could be disruptive to the operation and safety of the CCR unit and appurtenant structures were identified during the field inspection.

There are no significant changes to the structural integrity or operation of the impoundment since the 2015 inspection.

5.5 DRY FLY ASH DISPOSAL AREA

5.5.1 Geometry Changes Since Last Inspection

Site 3 continued to receive significant ash loading after the October 2015 inspection. Site 3 is divided into approximately four sequential sections from the east to the west. APS places ash in these sections from east to west to maintain a grade that will allow stormwater to drain off the west side of Site 3.

5.5.2 Instrumentation

There are no instruments associated with the DFADA.

5.5.3 CCR Volume

The approximate volume of CCR in the DFADA at the time of the inspection was estimated to be 4,078 ac-ft based on the October 2016 survey performed by the ash placement contractor.

5.5.4 Structural Weakness or Operational Change/Disruption

No conditions associated with structural weakness were identified during the field inspection.

No conditions that are or could be disruptive to the operation and safety of the CCR unit and appurtenant structures were identified during the field inspection.

There are no significant changes to the structural integrity or operation of the landfill since the 2015 inspection.

6.0 OPERATION AND MAINTENANCE RECOMMENDATIONS

The following items were noted during inspections as requiring attention.

6.1 LINED ASH IMPOUNDMENT

Observed Condition	Action Item
1) The elevation marker near the Drop Inlet Riser is covered with ash.	Wash off the ash covering the impoundment elevation marker adjacent to the Drop Inlet Riser adjacent to crest of West Embankment.
2) The 8-inch HDPE outlet pipe may be partially clogged.	Clean the 8-inch HDPE outlet pipe.
3) Prepare budget, plan, and scope work to update the Emergency Action Plan.	APS is currently working to update the Emergency Action Plan.
4) There is a series of small depressions along the edge of the geomembrane liner anchor trench on the Northwest Embankment.	Monitor the depressions and repair them if necessary.
5) Vegetation is growing out of tears in the upstream geomembrane liner.	Vegetation was removed and liner repaired.
6) There is a sandstone block sitting on top of the liner along the Northwest Embankment.	Remove the sandstone block and repair any damage to the liner its presence may have caused.

6.2 LINED DECANT WATER POND

Observed Condition	Action Item
1) The liner in the anchor trench in the northern portion of the West Embankment appeared to have been torn out of the trench and is shoved up along the crest.	Investigate the cause of the damage and repair the liner as necessary.
2) Minor erosion rilling, presumably caused by rainfall runoff, was observed on the external slopes of the LDWP at the time of the inspection.	Continue ongoing repair program for repairing rills if the erosion depth exceeds one foot.
3) Prepare budget, plan, and scope work to update the Emergency Action Plan.	APS is currently working to update the Emergency Action Plan.

6.3 COMBINED WASTE TREATMENT POND

Observed Condition	Action Item
1) Recommend maintenance of all vegetation sufficient to allow thorough inspection of the soil and rip rap conditions on the faces and crests of the embankments. Vegetation removal should be performed in accordance with the NMOSE vegetation maintenance guidelines "*Vegetation Management on Dams*" (2011) reference.	This will be an ongoing maintenance requirement.
2) The downstream slope does not have riprap protection above the water line and appears to be oversteepened.	Install riprap to protect the existing slope.

6.4 UPPER RETENTION SUMP

Observed Condition	Action Item
1) Monitor the erosion in the northeast corner.	This will be an ongoing maintenance requirement.
2) The canal and associated drain pipe feeding into the Upper Retention Sump were clogged at the time of the inspection.	APS was in the process of cleaning the canal and pipe during the inspection. This will be an ongoing maintenance requirement.
3) The access ramp in the northwest corner of the unit appeared to have been undermined.	Continue to monitor the undermined area and repair or replace if determined necessary.

6.5 DRY FLY ASH DISPOSAL AREA

Observed Condition	Action Item
1) There is erosion at the inlet and outlet of the Storm Water Diversion Channel.	Perform an engineering re-evaluation to understand whether the run off pattern has changed or whether a different erosion control method should be applied.
2) There is damage to the geomembrane liner on the east side of the Cell 1 collection pond.	Repair the liner.
3) Several plants are growing through the Pyramat geosynthetic along the toe of Cell 1.	Monitor the plant growth and remove the vegetation if it is determined to be damaging the primary geomembrane liner.

7.0 REFERENCES

Arizona Public Service Corporation. 2016. *Four Corners Power Plant Lined Ash Impoundment, Lined Decant Water Pond, Combined Waste Treatment Pond, Upper Retention Sump, and Dry Fly Ash Disposal Area – Annual CCR Impoundment and Landfill Inspection Report – 2015*. January.

Federal Emergency Management Agency. 2005. *Technical Manual for Dam Owners, Impacts of Plants on Earthen Dams, FEMA Manual 534*. September.

New Mexico Office of the State Engineer (NMOSE). Dam Safety Bureau. 2011. *Vegetation Management on Dams*. 3 pgs. August 15.

United States Environmental Protection Agency (EPA), 2015. *40 CFR Parts 257 and 261 – Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*. Federal Register Vol. 80, No. 74. April 17.

Weather Underground, Web. 2016. "Weather History for KFMN – January, 2016." <https://www.wunderground.com/history/airport/KFMN/2016/1/2/CustomHistory.html?dayend=17&monthend=10&yearend=2016&req_city=&req_state=&req_statename=&reqdb.zip=&reqdb.magic=&reqdb.wmo>. 8 November.

FIGURES

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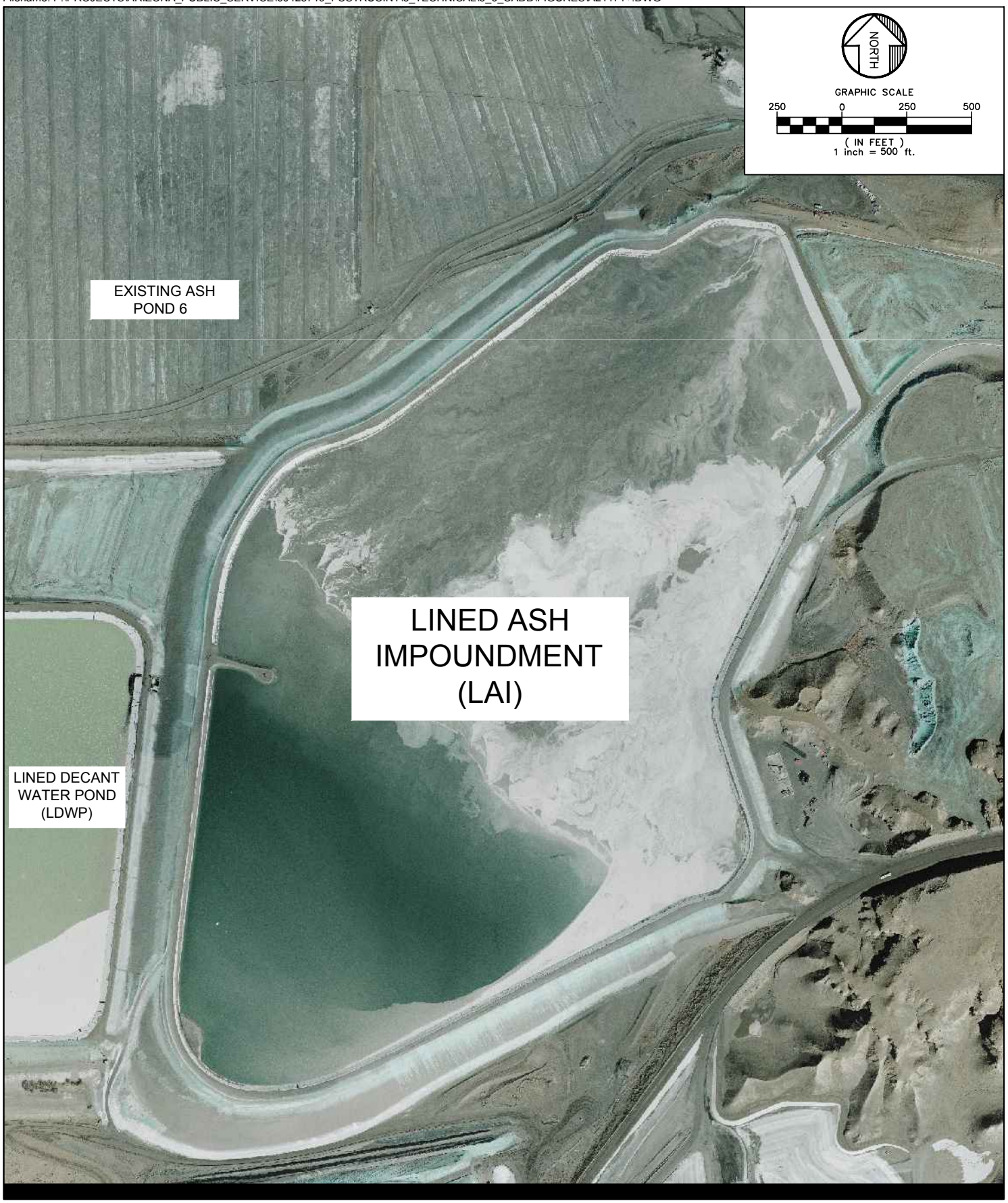

FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

LINED ASH IMPOUNDMENT (LAI)

AECOM

FIGURE 1

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FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

LINED DECANT WATER POND (LDWP)

AECOM

FIGURE 2

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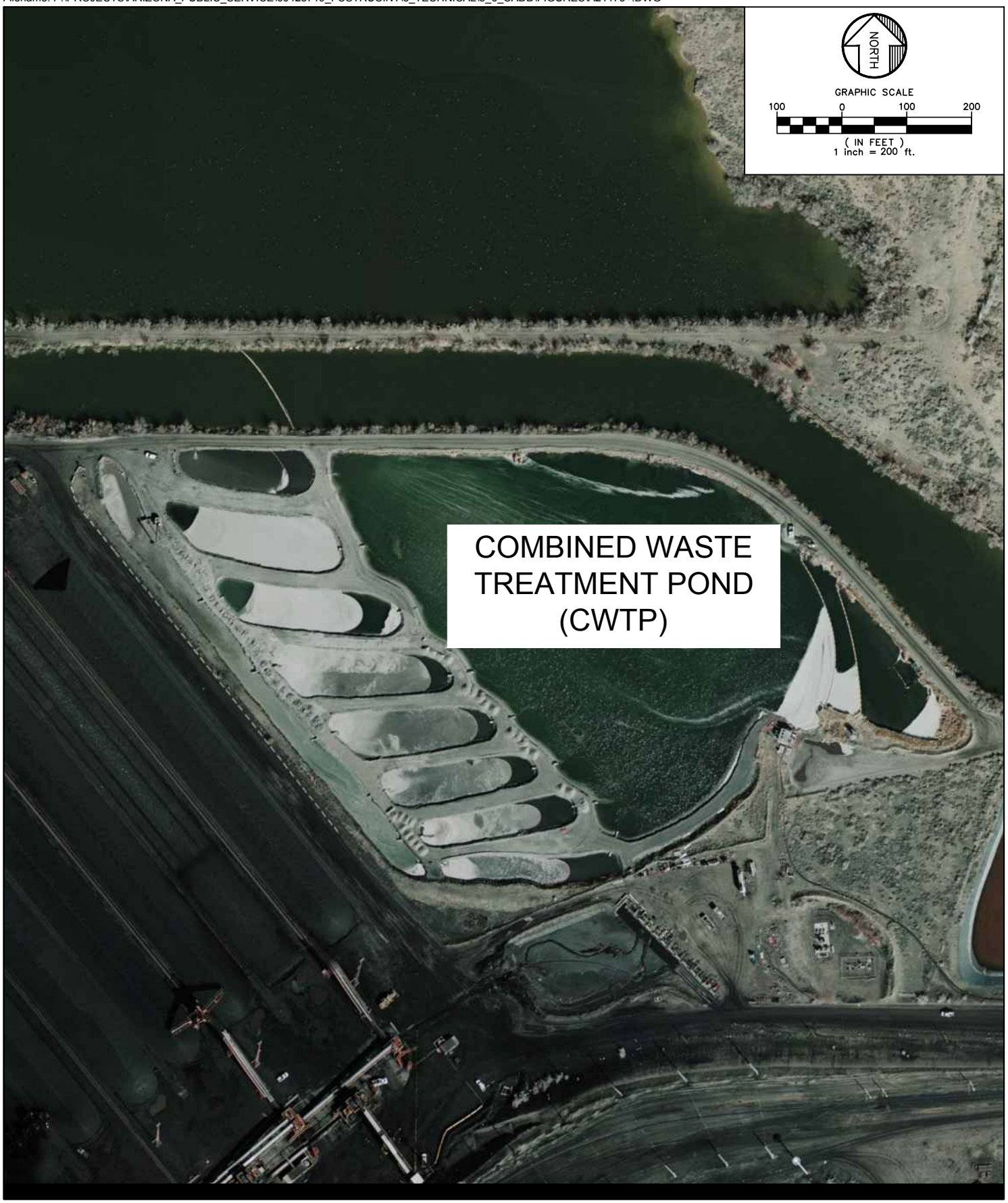

FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

COMBINED WASTE TREATMENT POND (CWTP)

AECOM

FIGURE 3

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ANSI A 8.5" x 11"

FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

UPPER
RETENTION SUMP

AECOM

FIGURE 4

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FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

DRY FLY ASH
DISPOSAL AREA
(DFADA)

AECOM

FIGURE 5

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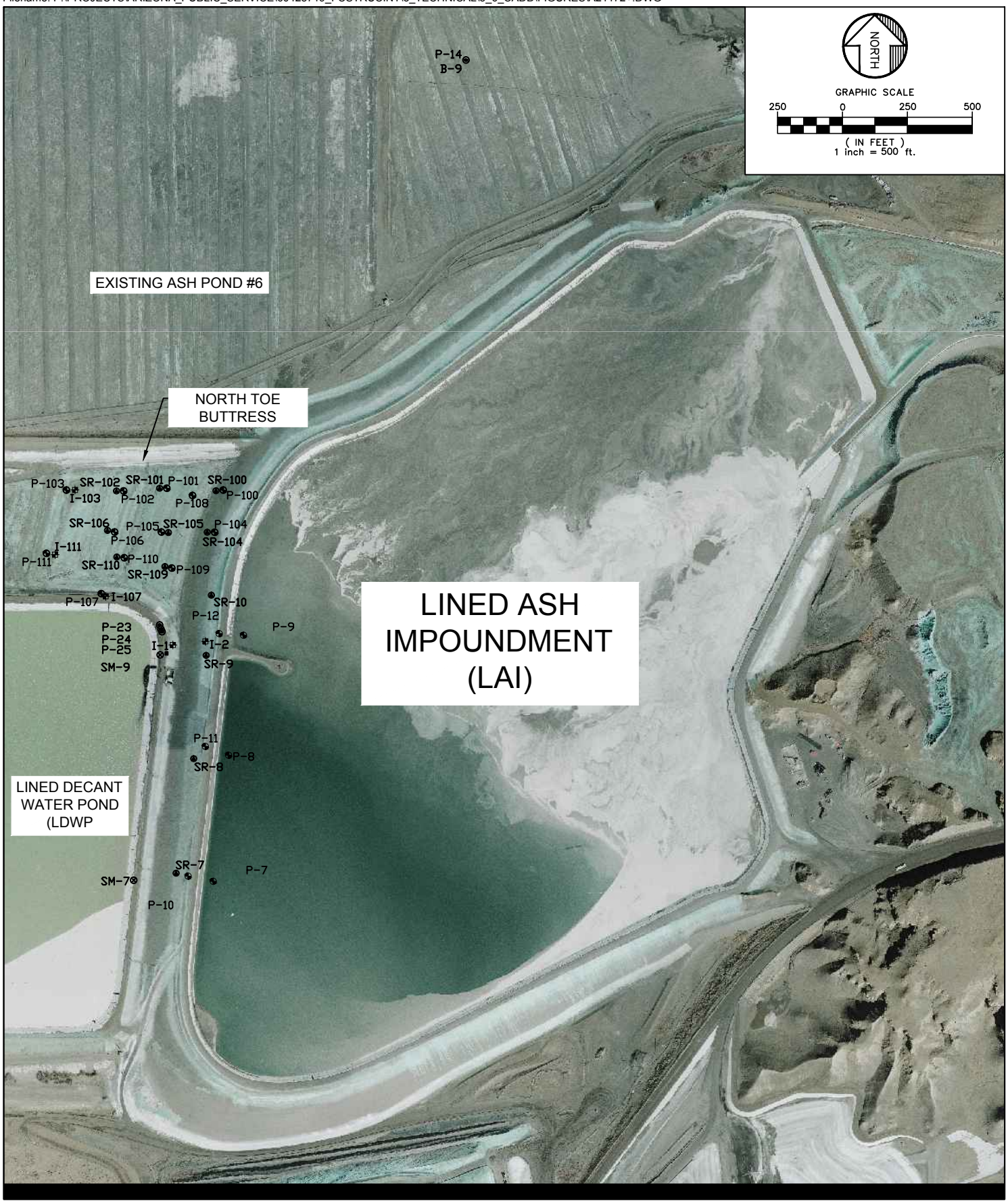

FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

LINED ASH IMPOUNDMENT (LAI) INSTRUMENTATION MAP

AECOM

FIGURE 6

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ANSI A 8.5" x 11"

FOUR CORNERS POWER PLANT
CCR IMPOUNDMENT AND LANDFILL INSPECTION REPORT
ARIZONA PUBLIC SERVICE

LINED DECANT WATER POND (LDWP) INSTRUMENTATION MAP

AECOM

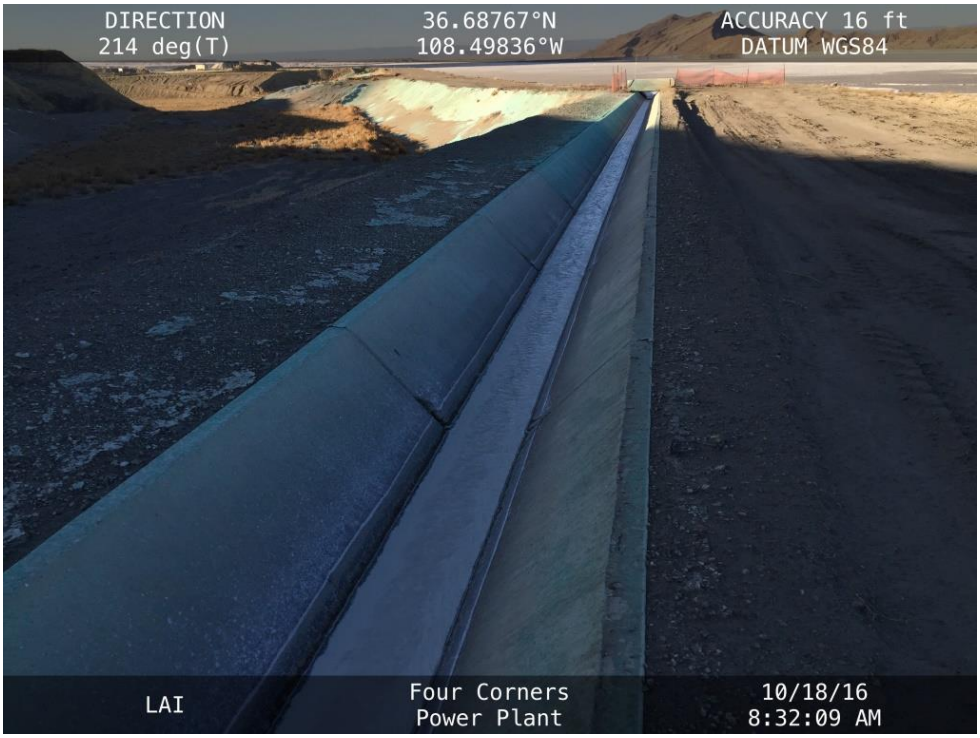
FIGURE 7

APPENDIX A

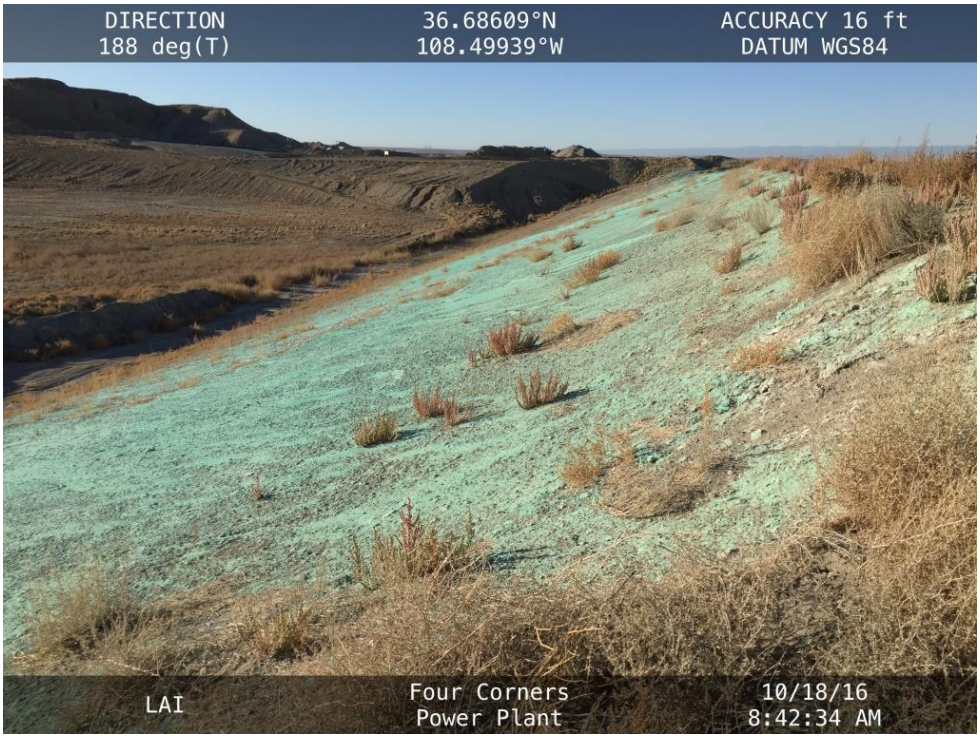
LINED ASH IMPOUNDMENT (LAI) PHOTO LOG

20161018 – IMG_1713
The East Embankment crest of the LAI, facing north.

20161018 – IMG_1714
The upstream slope of the East Embankment, facing north.



20161018 – IMG_1718
The V-ditch transporting FGD slurry to the LAI.



20161018 – IMG_1727
The downstream slope of the East Embankment, facing south.

20161018 – IMG_0195
The crest of the South Embankment, facing east.

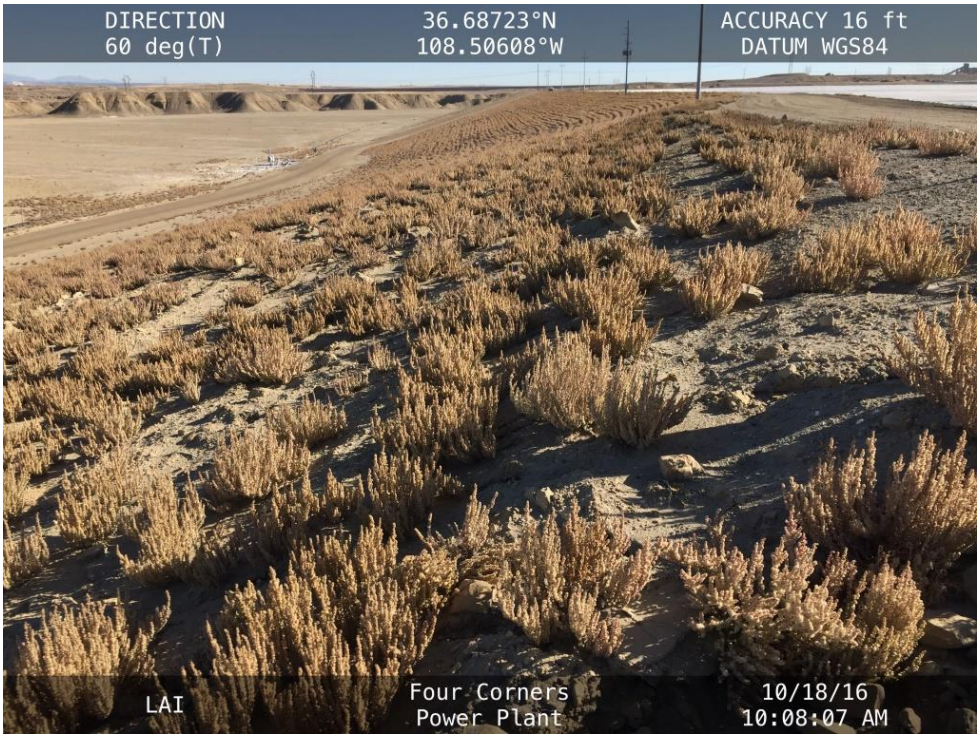
20161018 – IMG_1768
The downstream slope of the West Embankment, facing north.

20161018 – IMG_1771
Area of erosion repair along the downstream slope of the West Embankment, facing west from the crest toward the toe and the LDWP.

20161018 – IMG_1783
Ash covering the water elevation marker near the Drop Inlet Riser.

20161018 – IMG_1792
The NTB as seen from the crest of the LAI, facing west.

20161018 – IMG_1799
The crest of the West Embankment, facing south.



20161018 – IMG_1803

The Northwest Embankment of the LAI, facing east. The slope was regraded and drill-seeded as part of the adjacent Ash Pond 6 (left side of photo) closure.

20161018 – IMG_1806

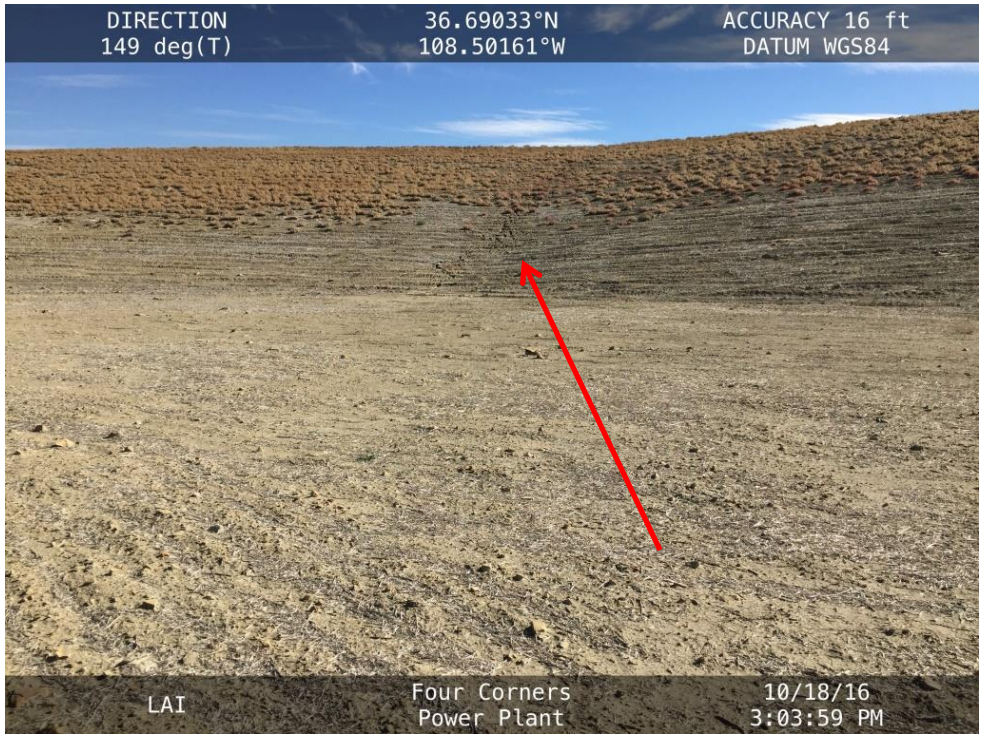
A series of small depressions along the interface between the anchor trench and the geomembrane liner on the Northwest Embankment.

20161018 – IMG_1812
Vegetation growing in a liner tear along the Northwest Embankment.

20161018 – IMG_1813
Vegetation growing in a liner tear along the Northwest Embankment.

20161018 – IMG_1814
A block of sandstone on top of the liner along the Northwest Embankment.

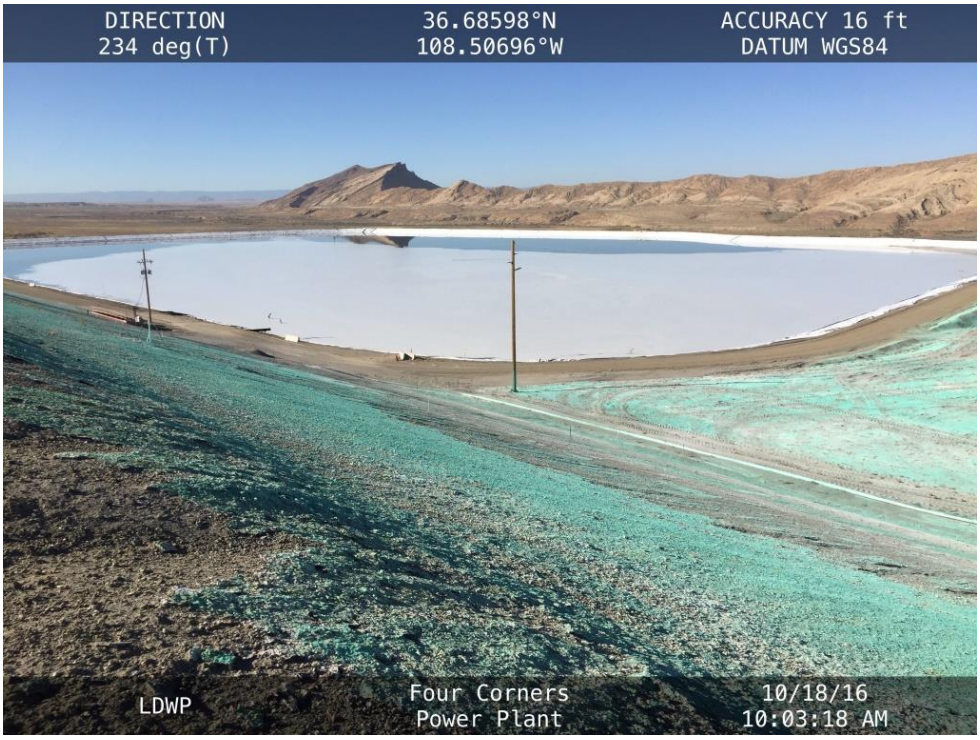
20161018 – IMG_1910
The French drain (South Toe Drain) outlet southwest of the LAI South Embankment in a dry condition.



20161018 – IMG_1946
Erosion in the groin of the Northwest Embankment, facing south.

APPENDIX B

LINED DECANT WATER POND (LDWP) PHOTO LOG



20161018 – IMG_1794
Overview of the LDWP, facing southwest from the LAI crest.

20161018 – IMG_1815
Anchor trench, liner pulling up in the northwest corner of the LDWP.

20161018 – IMG_1816
Anchor trench, liner pulling up in the northwest corner of the LDWP.

20161018 – IMG_1822
The downstream slope of the LDWP West Embankment, facing south from the crest.

20161018 – IMG_1834
The upstream slope of the LDWP West Embankment, facing north.

20161018 – IMG_1837
The upstream slope of the LDWP South Embankment, facing east.

20161018 – IMG_1838
The crest of the LDWP West Embankment, facing north.

20161018 – IMG_1839
The crest of the LDWP North Embankment, facing east.

20161018 – IMG_1840
The downstream slope of the LDWP North Embankment, facing east.

20161018 – IMG_1847
The upstream slope of the LDWP North Embankment, facing east.

20161018 – IMG_1850
The 8-inch and 16-inch HDPE outlet pipes conveying decant water from the LAI.

20161018 – IMG_1865
The crest of the LDWP East Embankment, facing south.

20161018 – IMG_1866
The upstream slope of the LDWP East Embankment, facing south.

20161018 – IMG_1883
Area of repaired erosion along the South Embankment.

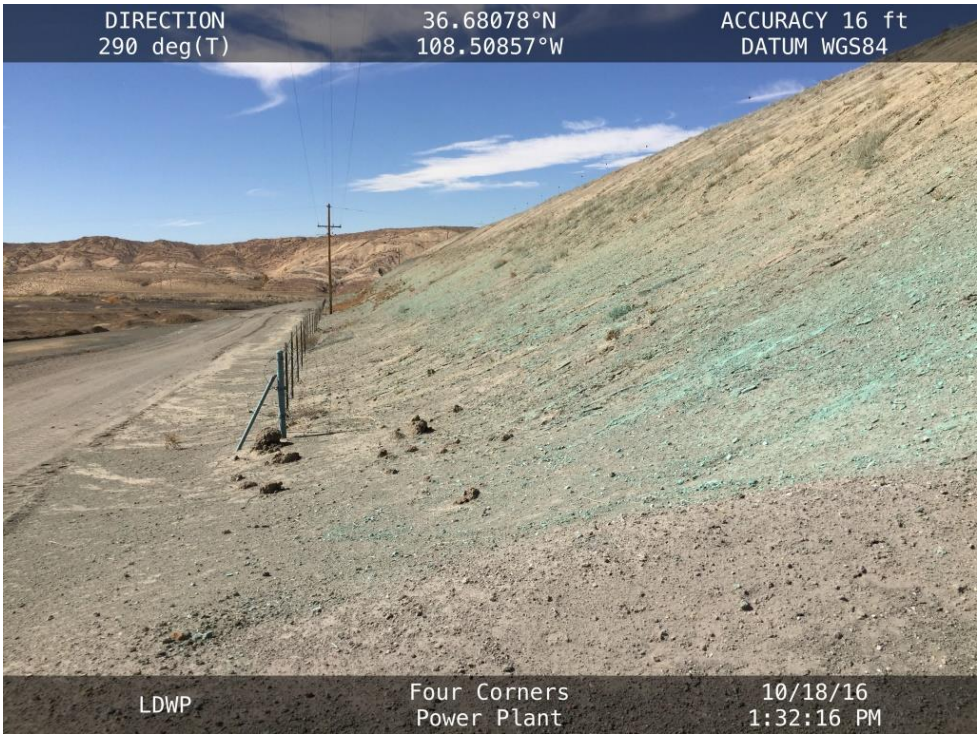
20161018 – IMG_1887
The crest of the LDWP South Embankment, facing east.

20161018 – IMG_1889
Areas of newer erosion rills along the LDWP South Embankment.

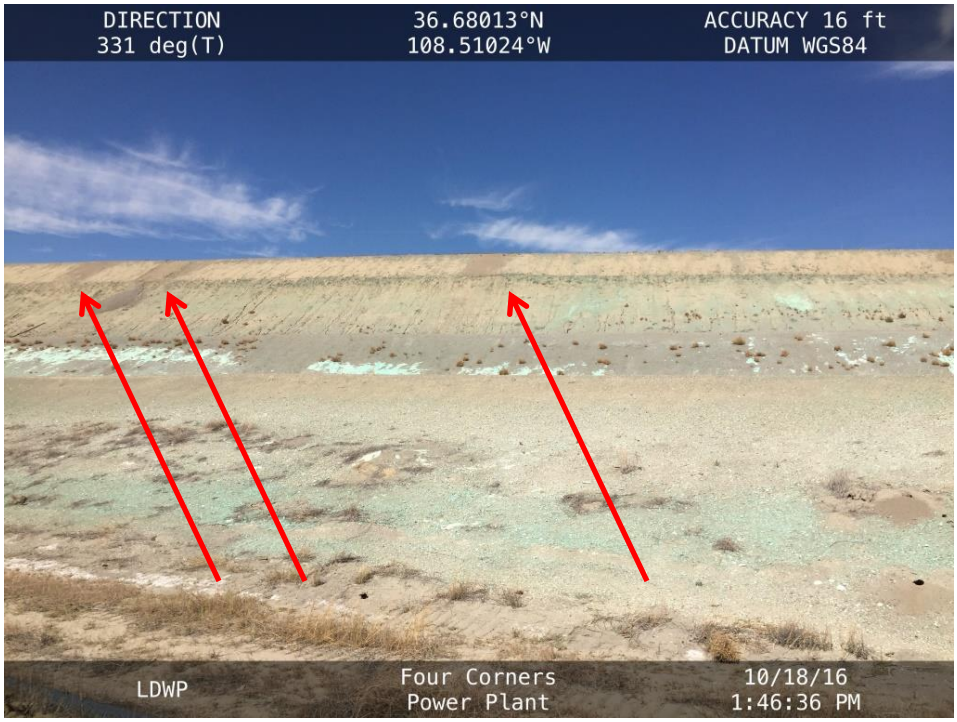
20161018 – IMG_1891
The interstitial geomembrane leak detection and evacuation pump.

20161018 – IMG_1895
The downstream slope of the LDWP West Embankment, facing north.

20161018 – IMG_1902
Erosion adjacent to a buried pipe for the Dead Pool Sump in the southeast corner of the LDWP.

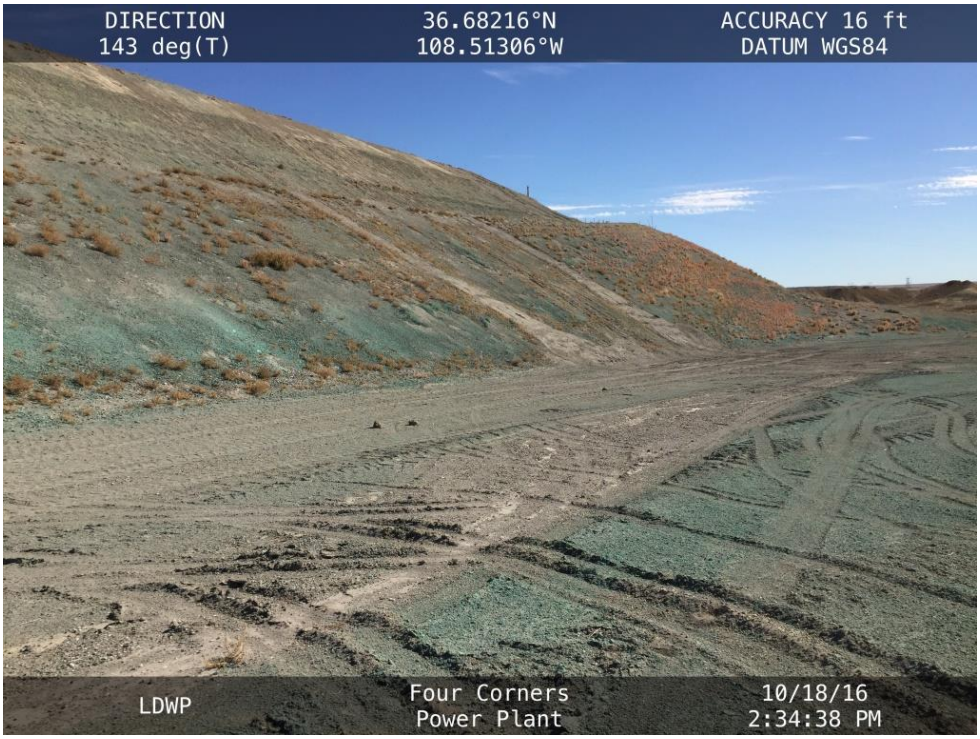


20161018 – IMG_1903
The South Embankment of the LDWP along the upper berm, facing west.



20161018 – IMG_1914
The South Embankment of the LDWP, facing north from the toe. The arrows point to locations where erosion has been repaired.

20161018 – IMG_1925
The pipe connecting to the Pond 3 Pump House across the West Embankment of the LDWP, facing east.



20161018 – IMG_1932
The West Embankment of the LDWP, facing south.

APPENDIX C

COMBINED WASTE TREATMENT POND (CWTP) PHOTO LOG

20161017 – IMG_1475
The downstream slope of the CWTP embankment and the outfall to the discharge canal, facing north.

20161017 – IMG_1476
The eastern section of the CWTP crest, facing north from the south abutment.

20161017 – IMG_1480
The downstream slope of the CWTP embankment, facing north.

20161017 – IMG_1497
Riprap below the water line along the downstream slope.

20161017 – IMG_1499
The upstream slope of the CWTP, facing west.

20161017 – IMG_1504
The northern section of the CWTP crest, facing west.

20161017 – IMG_1506
The downstream slope of the CWTP, facing west. The arrow is pointing to an oversteepened portion.

20161017 – IMG_1508
The upstream slope of the CWTP along the northern section, facing east.

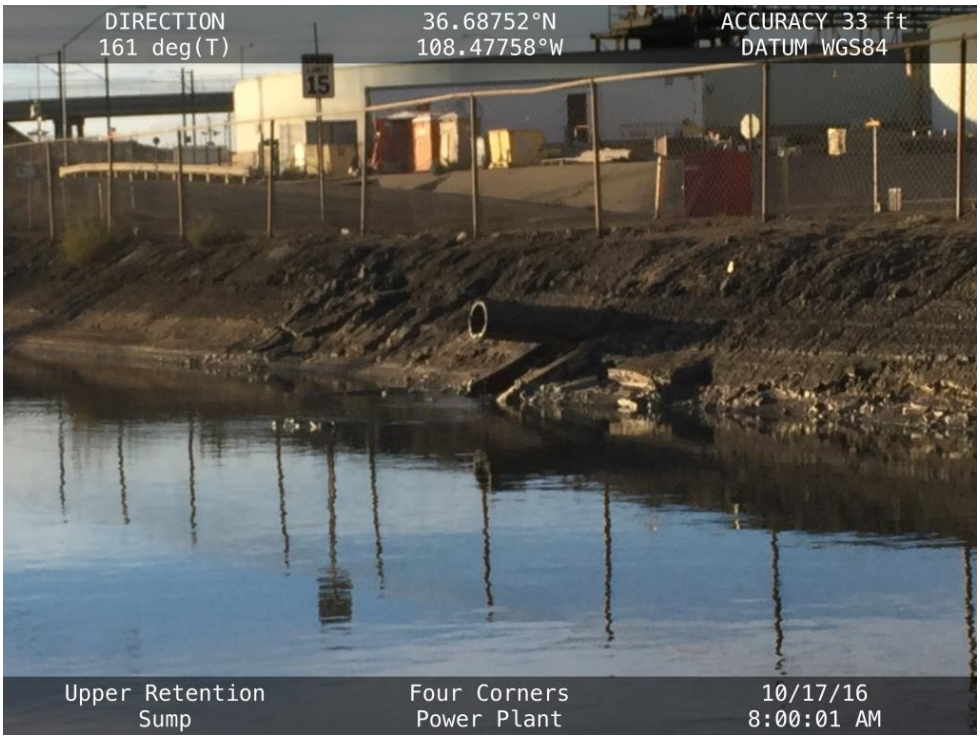
20161017 – IMG_1510
The upstream slope of the CWTP along the northern section, facing west.

20161017 – IMG_1532
A decant cell in the CWTP partially filled with solids.

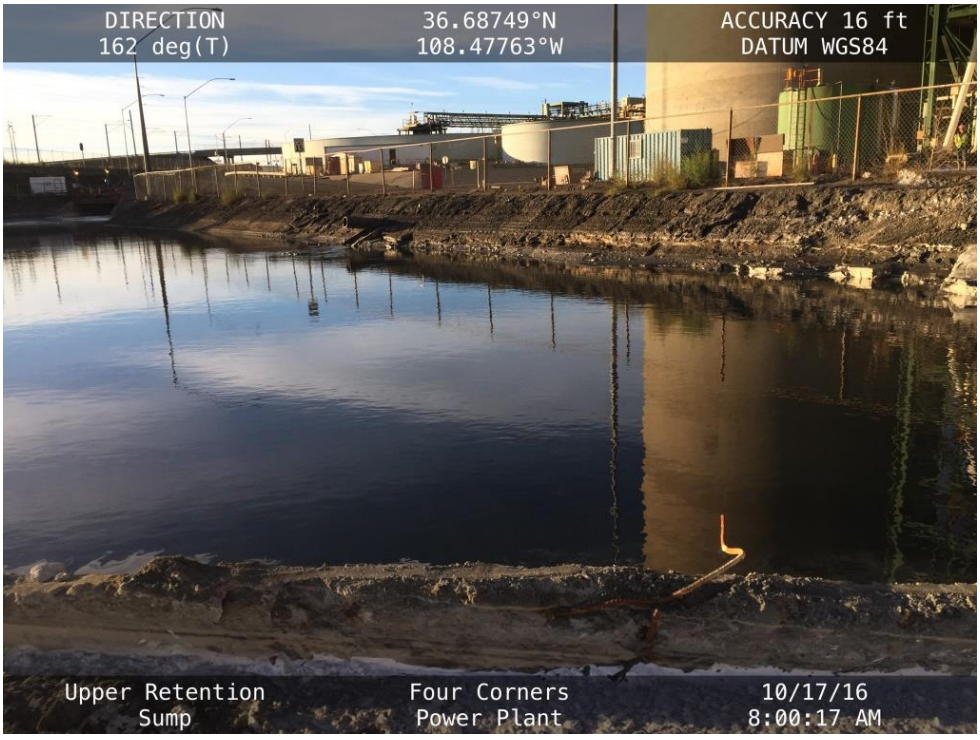
20161017 – IMG_1538
Outlet pipes connecting individual decant cells to the CWTP.

APPENDIX D

UPPER RETENTION SUMP PHOTO LOG



20161017 – IMG_1421
An inlet pipe along the west side of the Upper Retention Sump turned upward at a slight angle.



20161017 – IMG_1423
The west side of the Upper Retention Sump, facing southwest.

20161017 – IMG_1425
The north side of the Upper Retention Sump, facing west.

20161017 – IMG_1428
The northeast corner of the Upper Retention Sump, facing east.

20161017 – IMG_1429
The upstream slope along the east side of the Upper Retention Sump, facing south.

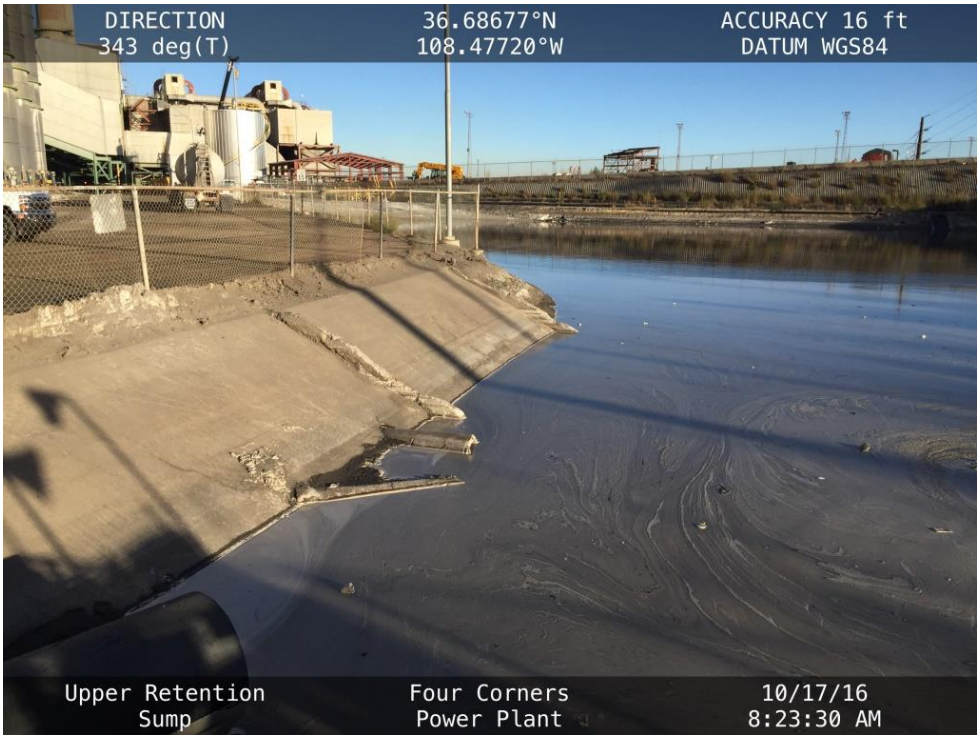
20161017 – IMG_1436
A crack in the cement along the east side of the Upper Retention Sump.

20161017 – IMG_1439
Debris present in the reservoir.

20161017 – IMG_1442
Several inlet pipes along the south side of the Upper Retention Sump.

20161017 – IMG_1447

Undermining beneath the concrete ramp in the northwest corner of the Upper Retention Sump.



20161017 – IMG_1462

The upstream slope along the east side of the Upper Retention Sump, facing north.

20161017 – IMG_1467
The canal to the west of the Upper Retention Sump filled with solids.

APPENDIX E

DRY FLY ASH DISPOSAL AREA (DFADA) PHOTO LOG

20161017 – IMG_1607
Overview of Cell 3 from the South Embankment of the LAI, facing southwest.

20161017 – IMG_0095
Ongoing ash placement in Cell 3, facing south from the South Embankment of the LAI.

20161017 – IMG_1611
The north side of Cell 1, facing south from the South Embankment of the LAI.

20161017 – IMG_1612
Ongoing CCR, ash placement in Cell 3, facing east from the South Embankment of the LAI.

20161017 – IMG_1614
Inlet to the Storm Water Diversion Channel, facing east from the ash haul road.

20161017 – IMG_1620
The eastern toe of Cell 2, facing west.

20161017 – IMG_1622
The diversion channel south of the DFADA, facing southwest.

20161017 – IMG_1628
Sediment in the diversion channel south of the DFADA.

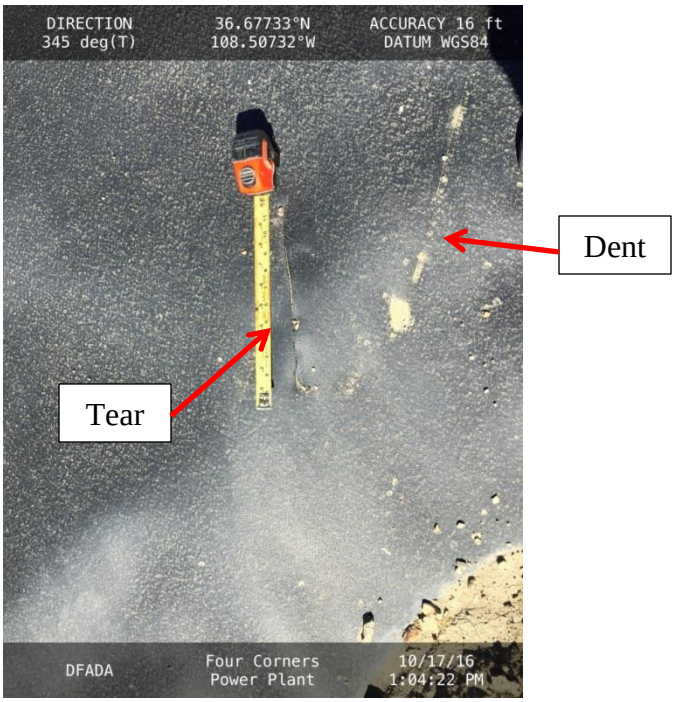
20161017 – IMG_1636
The south slope of Cell 1, facing northwest.

20161017 – IMG_1637
Erosion at the diversion channel outlet. The erosion is approximately 5 feet deep.

20161017 – IMG_1646
The south slope of Cells 1 and 2, facing north.

20161017 – IMG_1649
The south slope of Cell 1, facing west along the toe.

20161017 – IMG_1658
Vegetation growing in the Cell 1 collection pond.



20161017 – IMG_1664
Damage to the geomembrane along the crest of the Cell 1 collection pond. The measuring tape is 12 inches long.

20161017 – IMG_1668
Vegetation and algae growing in drainage ditch between Cell 1 and the collection pond.

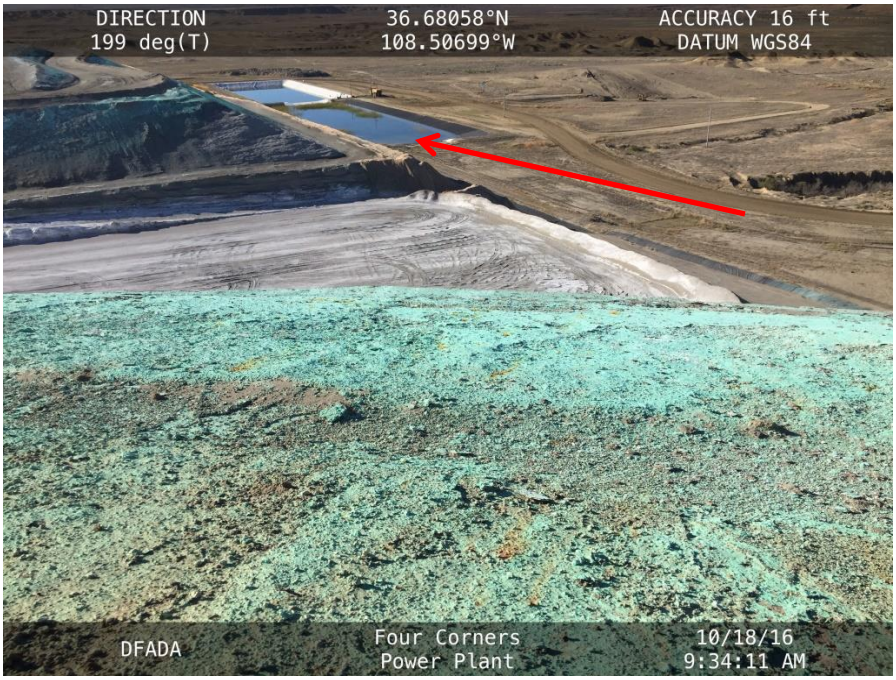
20161017 – IMG_1677
Vegetation growing toe of western slope of Cell 1 at the collection pond.

20161017 – IMG_0108
Woody vegetation growing through tears in the Pyramat in the west slope of Cell 1.

20161017 – IMG_1690
Looking southeast on ash haul road (in DFADA) cell 3 on right cell 1 in back.

20161017 – IMG_1697

The internal slope between the north side of Cell 2 and the south side of Cell 3, facing northeast.



20161018 – IMG_1754

The two leachate collection ponds for the DFADA, facing south from the South Embankment of the Lined Ash Impoundment (LAI),

20161018 – IMG_1912
The contact between Cell 3 (center), the LAI (left), and Cell 1 (right), facing east.