

US EPA ARCHIVE DOCUMENT



Arizona Electric Power Cooperative, Inc.

P.O. Box 670 • Benson, Arizona 85602-0670 • Phone 520-586-3631

VIA E-MAIL

January 14, 2010

Mr. Stephen Hoffman
Office of Resource Conservation and Recovery (5304P)
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

**RE: AEPCO RESPONSE TO EPA SITE ASSESSMENT REPORT
RECOMMENDATIONS**

Dear Mr. Hoffman:

Arizona Electric Power Cooperative, Inc. appreciates the opportunity to provide information and a schedule on how each of the recommendations found in the "Final – Specific Site Assessment for Coal Combustion Waste Impoundments at Arizona Electric Power Cooperative (AEPCO) Apache Power Plant" report completed in December 2009 will be undertaken. Please see attached "Comments to GEI Final Report Section 12.0."

AEPCO will not be asserting business confidentiality on any of the information contained in this response.

We look forward to working with EPA as we begin implementation of these recommendations. These projects will be given the highest priority by AEPCO staff as we continue to maintain the facility to ensure the highest safety standards.

If you have questions regarding the content of these comments, please contact me at 520-586-5122 or mfreeark@ssw.coop.

Sincerely,

Michelle R. Freeark
Manager of Environmental Services

Attachments

cc: File: CERCLA/EPA Ash Pond Inspection/2009 w/ enc.

Comments on GEI Final Report Section 12.0

Specific Site Assessment for Coal Combustion Waste Impoundments
Arizona Electric Power Cooperative (AEPCO) Apache Power Plant
Cochise, AZ
December 2009

Page 39, Section 12.1

- Recommendation: The locally sparse granular rock slope protection on the downstream slopes of several of the embankments should be repaired.
- Implementation strategy: AEPCO will either re-grade the locally sparse granular rock slope protection, or procure and place additional rock on the downstream slopes of several of the embankments.
- Schedule: Second quarter 2010

Page 39, Section 12.3

- Recommendation: Prudent practice is to provide redundancy in the system operations, which could include an automatic shutoff control system for the pumps delivering slurried fly ash or slurried scrubber sludge to the impoundments to prevent overflowing of the ponds, or an automatic control system to start the recirculation pump system in case water levels in the impoundments exceed required operating levels. An alternative for this facility is to modify the existing outlets from the currently operated ash ponds and scrubber sludge ponds to discharge to adjacent empty ponds and serve as passive controls for the pond levels. This approach could be employed as long as the water levels in the adjacent ponds are below the water levels in the currently operated ponds.
- Implementation strategy:
 - To address the concerns of overflowing the ponds, AEPCO intends to install passive controls. In order to accomplish, AEPCO will remove blind flanges in the common Ash Pond Recirculation Water Sump and adjust stop logs in the water intake towers to allow excess water from active Ash Ponds 1 & 2 to flow to inactive Ash Ponds 3 & 4.
 - AEPCO will also fabricate and install an HDPE standpipe on the uppermost HDPE crossover pipe in active Scrubber Sludge Pond 1 to allow excess water to flow to inactive Scrubber Sludge Pond 2.
- Schedule: Third quarter 2010

- Recommendation: Expand instrumentation to include staff gauges for each of the impoundments. The elevations of the staff gauges should be established by survey methods. The staff gauges should be used for estimating the pond surface elevations, which should be periodically compared to the surveyed elevations of the pond crest to maintain adequate freeboard. No piezometers are currently installed at the facility and a modest level of instrumentation for water levels within the exterior dam embankment should be implemented to provide warning of changing conditions in addition to any warning currently provided by routine visual observation. Install observation well or piezometer instrumentation or other means of monitoring water levels consistent with standard engineering practice at locations near the maximum dam section and other potentially critical locations to enable measurement of water levels within the dam embankments and dam foundations should the HDPE lining become compromised. If seepage or liner leaks are observed in the future, piezometers should be installed to enable evaluation of the problem area.

- Implementation strategy:
 - AEPCO will fabricate and install staff gauges for each impoundment per the schedule below.

 - AEPCO agrees to evaluate the installation of piezometers in the critical section(s) of the embankment(s) should significant liner leaks be observed.

- Schedule: Second quarter 2010



RE: Final Report Recommendations : Apache 📄

James Kohler to: Michelle Freeark

04/14/2010 09:02 AM

Cc: Charles Reece, James Andrew, Stephen Hoffman, mjjohnson, Bunkers.Mel, John Schofield

Michelle:

Sorry for my delayed response. Thanks for your attention to this matter and your decision to have the piezometers installed in 2010. Here are the answers to your questions:

1. Did EPA confer with the Arizona Department of Water Resources and the Arizona Department of Environmental Quality on the installation of the piezometers?

Yes. I've also cc'd Mel Bunkers of AZDEQ and Mike Johnson of ADWR to keep them in the loop.

2. Who will determine the required monitoring and reporting requirements for the newly installed piezometers?

EPA recommends AEPCO follow ADWR/AZDEQ's guidance. ADWR recommends that AEPCO prepare and submit a work plan for piezometer installation and monitoring. EPA expects AEPCO to comply with the state's requirements in the approved plan.

3. Is there any further involvement EPA will undertake in regards to the project?

EPA will continue doing oversight to ensure all recommendations in the final reports are implemented.

Please let me know if you have additional questions or concerns.

Respectfully,

Jim Kohler, P.E.
Environmental Engineer
LT, U.S. Public Health Service
U.S. Environmental Protection Agency
Office of Resource Conservation and Recovery
Phone: 703-347-8953
Fax: 703-308-0514

Michelle Freeark

[Jim, AEPCO is in agreement that piezometers wi...](#)

03/31/2010 04:30:59 PM

From: Michelle Freeark <mfreeark@ssw.coop>
To: James Kohler/DC/USEPA/US@EPA
Cc: Stephen Hoffman/DC/USEPA/US@EPA, James Andrew <jandrew@aepco.coop>, Charles Reece <creece@aepco.coop>
Date: 03/31/2010 04:30 PM
Subject: RE: Final Report Recommendations: Apache

Jim,

AEPCO is in agreement that piezometers will be installed in locations as depicted on the map provided by your office in a March 17, 2010 email. After internal discussions, AEPCO has some questions related to the actions of installing piezometers.

1. Did EPA confer with the Arizona Department of Water Resources and the Arizona Department of Environmental Quality on the installation of the piezometers?
2. Who will determine the required monitoring and reporting requirements for the newly installed piezometers?
3. Is there any further involvement EPA will undertake in regards to the project?

AEPCO plans to involve the firm that originally designed the facility, Burns & McDonnell, for the assistance in design and installation of the piezometers.

It is AEPCO's plan to have these installations completed in 2010.

Thanks,
Michelle Freeark

-----Original Message-----

From: Kohler.James@epamail.epa.gov [mailto:Kohler.James@epamail.epa.gov]
 Sent: Wednesday, March 17, 2010 6:19 AM
 To: Michelle Freeark
 Cc: Hoffman.Stephen@epamail.epa.gov
 Subject: RE: Final Report Recommendations: Apache

Michelle,

It was good speaking with you and Jim last week. In response to your questions on how many/where the piezometers should be installed, I've attached some guidance and a map. I understand that AEPCO has shallow wells immediately down gradient of the impoundments and you haven't had any liner problems in past. However, installing piezometers from the dam crest would deal with the stability issues (vs. the leakage issues) we are concerned about. Please let Steve or myself know if you have any questions. Thank you-

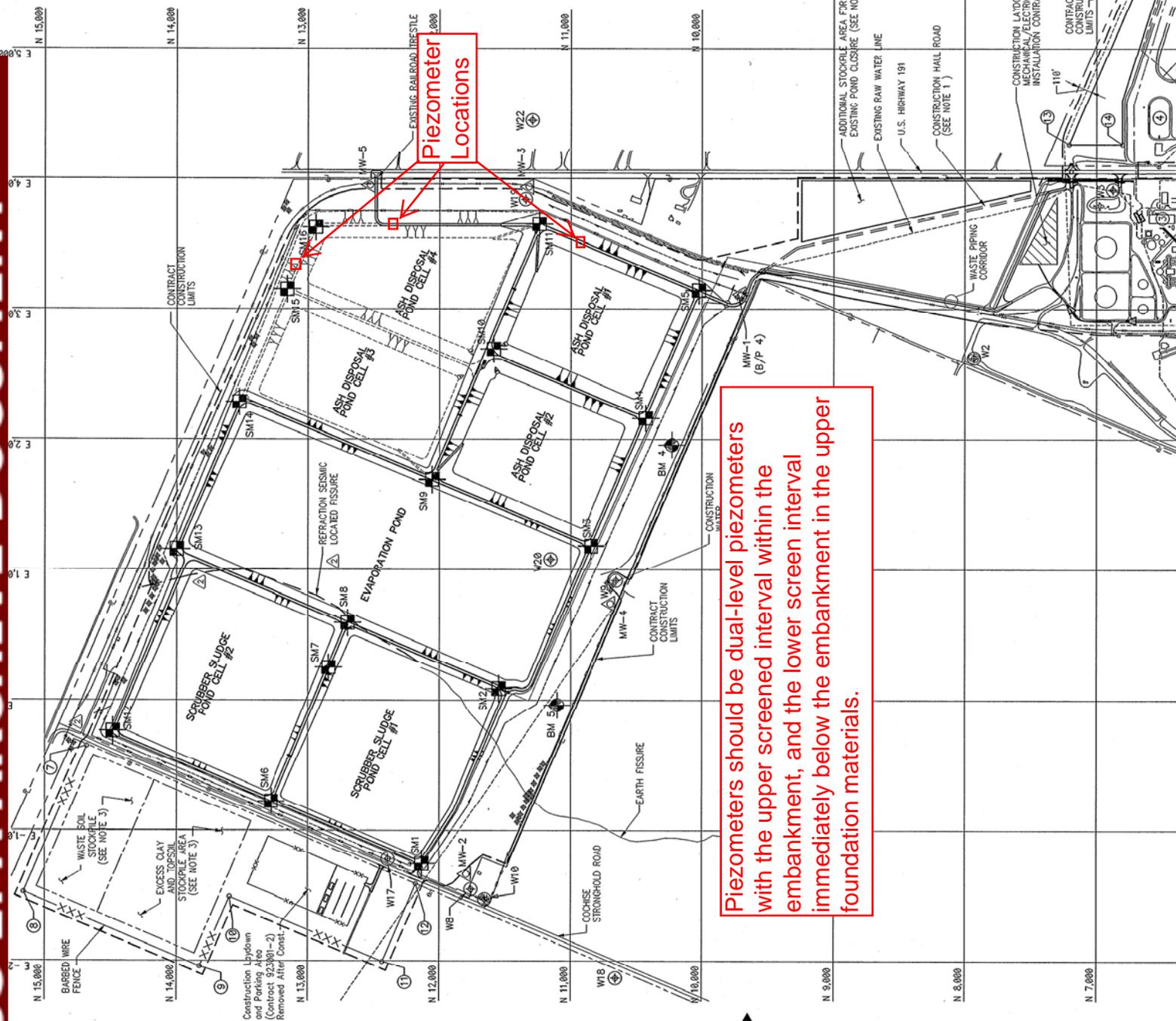
(See attached file: AEPCO Piezometer Locations.pdf)

 Jim Kohler, P.E.
 Environmental Engineer
 LT, U.S. Public Health Service
 U.S. Environmental Protection Agency
 Office of Resource Conservation and Recovery
 Phone: 703-347-8953
 Fax: 703-308-0514

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| From: |
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Piezometer Locations

Piezometers should be dual-level piezometers with the upper screened interval within the embankment, and the lower screen interval immediately below the embankment in the upper foundation materials.

DESCRIPTION	COORDINATES	WELL SCHEDULE	ELEVATION	CASE DIA. (IN)
W2	N 7,930.672 - E 2,624.656		4202.63	16
W3	N 6,976.951 - E 3,915.410		4180.14	18
W6	N 11,761.102 - E -1,451.632		4233.65	20
W9	N 10,652.841 - E 914.714		4211.43	16
W10	N 11,654.660 - E -1,529.655		4235.10	16
W17	N 12,301.119 - E -1,221.884		4230.30	16
W18	N 10,654.856 - E -2,130.246		4233.54	16
W19	N 11,345.276 - E 3,840.350		4186.61	12
W20	N 11,151.225 - E 1,091.048		4207.51	16
W22	N 11,293.781 - E 4,443.176		4182.79	-

DESCRIPTION	COORDINATES	ELEVATION
SM1	N 12,133.431 - E -1,254.725	4226.88
SM2	N 11,547.720 - E 87.688	4226.48
SM3	N 10,842.823 - E 1,180.830	4216.40
SM4	N 10,625.104 - E 2,188.985	4215.56
SM5	N 10,822.540 - E 3,141.543	4216.14
SM6	N 13,286.680 - E -776.074	4226.62
SM7	N 12,842.550 - E 290.359	4227.48
SM8	N 12,697.191 - E 592.136	4226.35
SM9	N 12,055.224 - E 1,690.146	4216.73
SM10	N 11,588.918 - E 2,692.156	4216.20
SM11	N 11,239.496 - E 3,650.067	4216.20
SM12	N 14,488.069 - E 237.388	4226.56
SM13	N 13,989.273 - E 1,157.884	4221.86
SM14	N 13,523.609 - E 2,285.194	4215.91
SM15	N 13,583.601 - E 3,151.401	4215.90
SM16	N 12,946.653 - E 3,625.647	4216.13

DESCRIPTION	COORDINATES	ELEVATION
MW-1	N 9,661.214 - E 3,162.465	4196.12
MW-2	N 11,795 - E -1,335	4228
MW-3	N 11,320 - E 3,935	4193 ±
MW-4	N 16,671.2 - E 774.8	4211.0
MW-5	N 12,528 - E 3,949	4192 ±

DESCRIPTION	COORDINATES	ELEVATION
BM 1	N 6,000.000 - E 4,000.000	4186.93
BM 2	N 5,000.000 - E 2,999.937	4193.71
BM 3	N 5,000.206 - E 3,000.163	4183.48
BM 4	N 10,285.991 - E 1,955.774	4202.26
BM 5	N 11,163.205 - E -383.322	4217.22

- EXISTING UNITS #1
- EXISTING UNITS #2
- EXISTING UNITS #3
- EXISTING UNITS #4
- EXISTING TOWER BLOWDOWN
- EXISTING COOLING
- EXISTING COOLING
- EXISTING COOLING
- THE INTO BRASS
- N 14,688
- E -351
- FENCE C
- N 15,160
- E -1,477
- FENCE C
- N 13,825
- E -2,044

