

In the Matter of the Application of Union Electric)
Company d/b/a Ameren Missouri for Permission and)
Approval and a Certificate of Public)
Convenience and Necessity Authorizing)
it to Construct, Install, Own,) File No. EA-2012-0281
Operate, Maintain, and Otherwise Control and Manage)
A Utility Waste Landfill and Related Facilities at its)
Labadie Energy Center.)

COMES NOW Union Electric Company d/b/a Ameren Missouri (“Ameren Missouri,” “Company” or “Applicant”), pursuant to 4 CSR 240-2.060, 4 CSR 240-3.105, and Section 393.170, RSMo., and hereby submits to the Missouri Public Service Commission (“Commission”), its Application for permission and approval and a certificate of public convenience and necessity (“CCN”) to expand the boundaries of its Labadie Energy Center, so that it can construct and operate a utility waste landfill and conduct other plant related operations at the site. In support of its request, Applicant states as follows:

1. Union Electric Company is a Missouri corporation doing business under the fictitious name of Ameren Missouri in good standing in all respects, with its principal office and place of business located at One Ameren Plaza, 1901 Chouteau Ave., St. Louis, Missouri 63103. Applicant is engaged in providing electric and gas utility services in portions of Missouri as a public utility under the jurisdiction of the Commission. There is already on file with the Commission a certified copy of Applicant's Articles of Incorporation (*See* Case No. EA-87-105), Applicant's Fictitious Name Registrations as filed with the Missouri Secretary of State's Office (*See* Case Nos. GO-98-486 and EN-2011-0069) and Applicant's Certificate of Corporate Good

Standing (*See* Case No. EO-2012-0134), and said documents are incorporated herein by reference and made a part hereof for all purposes.

2. Pleadings, notices, orders and other correspondence and communications concerning this Application should be addressed to:

Thomas M. Byrne
Director – Assistant General Counsel
Ameren Services Company
1901 Chouteau Ave.
P.O. Box 66149
St. Louis, MO 63166-6149
314-554-2514 (phone)
314-554-4014 (fax)
AmerenMOService@ameren.com

and

James B. Lowery
Smith Lewis, LLP
111 S. Ninth Street, Ste. 200
P.O. Box 918
Columbia, MO 65205
lowery@smithlewis.com

Applicant has no pending actions or final unsatisfied judgments or decisions against it from any state or federal agency or court which involve customer service or rates, which action, judgment, or decision has occurred within three years of the date of this Application, other than cases currently pending before the Commission, an appeal of a fuel adjustment clause disallowance pending in the Missouri Western District Court of Appeals (Docket No. WD75403), and an appeal of one aspect of the Commission's Report and Order in the Company's most recent electric rate case (Commission Case No. ER-2012-0166; Court of Appeals Case No. WD75980). The Applicant has no annual reports or assessment fees that are overdue.

II. REQUEST FOR A CCN

3. By this Application Ameren Missouri is requesting a certificate of public convenience and necessity to expand the boundaries of its Labadie Energy Center to include additional land immediately adjacent to the existing plant site. The additional land is needed at this time so that the Company can construct and operate a utility waste landfill (“UWL”) to replace the plant’s existing waste impoundments (commonly referred to as ash ponds), which are nearing capacity. The additional land consists of approximately 813 acres, which will be used at this time for the proposed UWL and thereafter for other plant operations as needed.

4. The original CCN for the Labadie Energy Center authorized the construction, operation and maintenance of Ameren Missouri’s largest coal-fired power plant, located in an unincorporated area of Franklin County, Missouri. The Labadie Energy Center began operating in 1970 and today consists of four coal-fired steam generating units and related facilities. The plant has a total generating capacity of approximately 2,400 megawatts, which is equivalent to approximately 40% of the Company’s native load requirements.

5. Like all coal-fired power plants, the Labadie Energy Center produces coal combustion products (“CCPs”) that must be recycled or disposed of. Since the plant began operations, the Company has stored the CCPs in ash ponds located at the existing plant site. When feasible, the Company has also recycled these materials for use as an ingredient in cement, for use in road construction and for other beneficial uses.

6. In 2004, the Company began studying various alternatives to provide storage for future CCPs once the existing ash ponds are filled to capacity, which is expected to occur in early 2016. The Company retained a consulting engineer (Reitz & Jens) to assist it, and evaluated 22 sites across the region for construction of a new UWL. The Company also

considered the option of transporting Labadie CCPs to a licensed landfill owned and operated by a third party.

7. Ultimately the Company determined that the best option which minimized cost as well as environmental and land use impacts, was construction of a Company-owned landfill on land adjacent to the current land occupied by the Labadie Energy Center.¹ A metes and bounds description of the additional area proposed for certification as part of the Labadie Energy Center (all of which is also located in unincorporated Franklin County) is contained in Exhibit A attached hereto and incorporated herein by this reference. Exhibit B attached hereto and incorporated herein by this reference contains a metes and bounds description of the two areas that make up the UWL itself.

8. The new UWL will be large. Specifically, the UWL will contain approximately 16.5 million cubic yards of airspace, and when fully constructed there will be four different cells with a combined capacity of approximately 15.5 million cubic yards. It is estimated that the four cells will be constructed over a period of 15-20 years (construction of one cell every approximately five years), with construction of the first cell scheduled to begin in early 2014. The UWL is expected to meet the Company's ash disposal needs at the Labadie Energy Center for approximately 24 years at current and estimated future disposal rates. Exhibit C, which is attached hereto and incorporated herein by this reference, contains a drawing and specifications for the proposed UWL.²

9. The UWL will be constructed and operated in compliance with all applicable safety and environmental requirements, and all other applicable laws and regulations. The UWL

¹ The existing plant site contains insufficient space for the proposed landfill.

² Additional details will be provided when the Company submits its Construction Permit Application to the Missouri Department of Natural Resources ("MDNR"), as required by 4 CSR 80-11.010. The Company expects to submit its Construction Permit Application soon, and will provide the same to the Staff and the Office of the Public Counsel, and any intervenors, concurrently with its submission to MDNR.

will consist of a geo-membrane, an additional clay liner, soil berms, and leachate collection and monitoring systems. Additionally, fabric formed concrete will be installed on the exterior berms to protect against any flood-induced erosion.³ Once the UWL has been filled to capacity, it will be capped and closed in accordance with all applicable landfill regulations.

10. Ameren Missouri has requested or soon will request all of the permits and approvals required for the construction of the proposed UWL. Specifically, as noted the Company intends to apply this month for a Construction Permit from the MDNR. Moreover, use of the land described on Exhibit A hereto for power plant purposes, including construction and operation of a UWL, is permitted under the applicable zoning regulations in Franklin County.⁴

11. Ameren Missouri expects to receive the last of the required permits and approvals (the MDNR Construction Permit) in approximately one year, which will allow it to begin construction of the UWL at the start of the 2014 construction season, which in turn will allow construction to be complete prior to the time when the existing ash ponds are expected to reach capacity in early 2016.⁵ While it is possible that the estimated date by which the existing ash ponds will be full could be slightly later than currently estimated, the estimate is likely to be

³ The facility will be designed and constructed so that it would not be impacted by a 500-year flood.

⁴ See Exhibit D attached hereto and incorporated herein by this reference. Franklin County zoning regulations contain certain administrative approval and permitting requirements for UWLs, including the requirement that an Independent Registered Professional Engineer approve the design and construction documents for a UWL prior to its construction. The Company has requested approval from Franklin County's Independent Registered Professional Engineer, who has indicated preliminary approval of the design of the UWL and has indicated that final review and approval will occur concurrently with MDNR's review of the MDNR Construction Permit Application. Upon completion of the construction, the Company will then apply for its Franklin County operating license, which is renewable annually thereafter (an operating permit cannot be obtained until construction is complete). The Franklin County approval and permitting requirements for UWLs were adopted in October 2011. The adoption of those requirements is currently the subject of a Writ of Certiorari proceeding pending in Franklin County Circuit Court (Case No. 11AB-CC00286), which was initiated by a group of landowners represented by an environmental group, the Interdisciplinary Environmental Clinic, at the Washington University School of Law. On January 1, 2013, the Franklin County Circuit Court entered judgment affirming the county's adopting of the approval and permitting requirements for UWLs. The Company also believes that regardless of the new approval and permitting requirements it already possesses all required zoning approvals from Franklin County insofar as the proposed UWL is an accessory use to the already permitted power plant. In any event, as noted, the Company is in full compliance with the new approval and permitting requirements in Franklin County and expects to receive final approval of its design and construction from Franklin County at or before the time it receives MDNR's approval.

⁵ Depending on weather conditions, two construction seasons may be required in order to complete construction.

quite accurate since Labadie is a baseload plant that is operated almost constantly, either to serve native load or to make off-system sales. It is important to obtain all approvals (including this request for a CCN) and to adhere to the proposed construction schedule because if the existing ash ponds are filled before the new facility is ready to receive CCPs, the Company will have to incur the considerable expense of disposing of the CCPs in an off-site facility owned by a third party, raising expenses for the Company and ultimately customers. Moreover, transportation of the CCPs to such a facility is likely to create adverse impacts in the vicinity of the plant, such as increased truck traffic.

12. The foregoing facts demonstrate that issuance of a CCN to expand the plant site to include the additional land described on Exhibit A hereto and to allow construction and operation of the UWL and thereafter other plant-related operations as needed is required by the public convenience and necessity.

13. The Company requests the Commission to approve this CCN request as soon as it reasonably can, but in no event later than December 31, 2013 so that all permissions required prior to commencement of construction of the UWL will have been obtained prior to the beginning of the 2014 construction season.

14. The estimated cost of the initial construction including the first cell is approximately \$27 million, which Ameren Missouri intends to finance this through use of existing funds and indebtedness.

15. The only electric and telephone lines of regulated and nonregulated utilities, railroad tracks or other underground facilities, as defined in section 319.015, RSMo., which the

proposed construction arguably crosses is an Explorer Pipeline Company refined products pipeline.⁶

16. Ameren Missouri filed a 60 day notice of this application as required by 4 CSR 240-4.020(2) on February 17, 2012.

WHEREFORE, Ameren Missouri respectfully requests that the Commission make and enter its Report and Order granting the Company's request for a certificate of public convenience and necessity to expand the boundaries of the Labadie Energy Center to include the land described on Exhibit A hereto.

Respectfully submitted,

/s/ James B. Lowery

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**ATTORNEYS FOR
UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI**

⁶ The UWL does not actually "cross" the pipeline, but roads serving the UWL will be built over the pipeline. A formal letter from Explorer Pipeline expressing lack of objection to the construction has not yet been received, but is expected in the near future and will be provided as a supplement to this Application at that time. The location of the pipeline between the two waste areas that make up the UWL is depicted on the first page of Exhibit C hereto.

VERIFICATION

I, Warren Wood, of lawful age, being duly sworn, deposes and says that: I am the Vice President of Legislative and Regulatory Affairs for Union Electric Company d/b/a Ameren Missouri; that I am duly authorized to and did sign the foregoing Application on behalf of Union Electric Company; that I have knowledge of the facts stated in the foregoing Application; and that said facts are true to the best of my knowledge, information and belief.

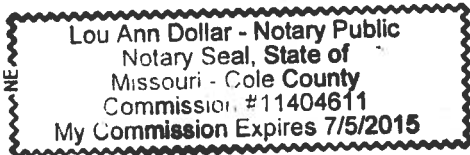


Warren Wood

Subscribed and sworn to before me this 22 day of JANUARY, 2013.



Notary Public LOU ANN DOLLAR



CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing Application has been e-mailed, this 24th day of January, 2013, to the Commission's Staff Counsel and on the Public Counsel.

/s/ James B. Lowery
James B. Lowery

PROPERTY DESCRIPTION

Ameren Labadie Site

Permit Boundary

PART OF SECTIONS 8 AND 17 AND PART OF U.S. SURVEY 98 IN TOWNSHIP 44 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN, FRANKLIN COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF LOT 1 OF "WORTHINGTON HEIRS SUBDIVISION" AS RECORDED IN PLAT BOOK C, PAGE 25 IN THE FRANKLIN COUNTY RECORDS, SAID SOUTHWEST CORNER BEING ON THE NORTHERLY RIGHT OF WAY LINE OF THE CHICAGO (100' W) ROCK ISLAND AND PACIFIC RAILWAY COMPANY; THENCE DEPARTING SAID NORTHERLY LINE AND ALONG THE WESTERLY LINE OF SAID "WORTHINGTON HEIRS SUBDIVISION" NORTH 01 DEGREES 28 MINUTES 18 SECONDS EAST, 80.58 FEET TO THE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED; THENCE DEPARTING SAID WESTERLY LINE SOUTH 71 DEGREES 57 MINUTES 43 SECONDS WEST, 53.86 FEET; THENCE SOUTH 61 DEGREES 52 MINUTES 36 SECONDS WEST, 208.05 FEET; THENCE SOUTH 60 DEGREES 39 MINUTES 30 SECONDS WEST, 331.03 FEET; THENCE SOUTH 69 DEGREES 57 MINUTES 40 SECONDS WEST, 377.65 FEET; THENCE SOUTH 77 DEGREES 17 MINUTES 21 SECONDS WEST, 250.40 FEET; THENCE NORTH 86 DEGREES 14 MINUTES 27 SECONDS WEST, 273.79 FEET; THENCE 89 DEGREES 40 MINUTES 33 SECONDS WEST, 235.30 FEET; THENCE NORTH 83 DEGREES 46 MINUTES 07 SECONDS WEST, 191.63 FEET; THENCE NORTH 87 DEGREES 02 MINUTES 14 SECONDS WEST, 216.88 FEET; THENCE SOUTH 84 DEGREES 28 MINUTES 52 SECONDS WEST, 166.48 FEET; THENCE SOUTH 71 DEGREES 37 MINUTES 58 SECONDS WEST, 120.83 FEET; THENCE SOUTH 71 DEGREES 28 MINUTES 48 SECONDS WEST, 164.93 FEET; THENCE SOUTH 55 DEGREES 47 MINUTES 10 SECONDS WEST, 343.76 FEET; THENCE SOUTH 55 DEGREES 28 MINUTES 54 SECONDS WEST, 805.68 FEET; THENCE NORTH 01 DEGREES 23 MINUTES 57 SECONDS EAST, 7597.67 FEET; THENCE SOUTH 86 DEGREES 27 MINUTES 31 SECONDS EAST, 5469.88 FEET; THENCE SOUTH 02 DEGREES 02 MINUTES 11 SECONDS WEST, 2991.70 FEET; THENCE SOUTH 01 DEGREES 17 MINUTES 10 SECONDS WEST, 1070.22 FEET; THENCE SOUTH 01 DEGREES 09 MINUTES 17 SECONDS WEST, 1239.51 FEET; THENCE SOUTH 01 DEGREES 42 MINUTES 10 SECONDS WEST, 492.33 FEET; THENCE SOUTH 81 DEGREES 39 MINUTES 02 SECONDS WEST, 663.60 FEET; THENCE SOUTH 83 DEGREES 24 MINUTES 58 SECONDS WEST, 688.43 FEET; THENCE SOUTH 84 DEGREES 50 MINUTES 23 SECONDS WEST, 306.70 FEET; THENCE SOUTH 80 DEGREES 32 MINUTES 21 SECONDS WEST, 241.96 FEET; THENCE SOUTH 71 DEGREES 57 MINUTES 43 SECONDS WEST, 176.34 FEET TO THE POINT OF BEGINNING.

SAID TRACT BEING SITUATED IN FRANKLIN COUNTY, MISSOURI AND CONTAINING 35,422,418 SQUARE FEET OR 813.187 ACRES, MORE OR LESS.

EXHIBIT A

PROPERTY DESCRIPTION

Ameren Labadie Site

Waste Boundary

PART OF SECTIONS 8 AND 17 AND PART OF U.S. SURVEY 98 IN TOWNSHIP 44 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN, FRANKLIN COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

CCP WASTE BOUNDARY AREA #1

COMMENCING AT THE SOUTHWEST CORNER OF LOT 1 OF "WORTHINGTON HEIRS SUBDIVISION" AS RECORDED IN PLAT BOOK C, PAGE 25 IN THE FRANKLIN COUNTY RECORD'S OFFICE, SAID SOUTHWEST CORNER BEING ON THE NORTHERLY RIGHT OF WAY LINE OF THE CHICAGO (100' W) ROCK ISLAND AND PACIFIC RAILWAY COMPANY; THENCE DEPARTING SAID NORTHERLY LINE AND ALONG THE WESTERLY LINE OF SAID "WORTHINGTON HEIRS SUBDIVISION" NORTH 01 DEGREE 28 MINUTES 18 SECONDS EAST, 4,248.10 FEET TO THE CENTERLINE OF LABADIE ROAD; THENCE ALONG THE CENTER LINE OF LABADIE ROAD, NORTH 86 DEGREES 48 MINUTES 00 SECONDS WEST, 1,529.46 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND HEREIN DESCRIBED; THENCE LEAVING SAID CENTERLINE, SOUTH 01 DEGREE 28 MINUTES 49 SECONDS WEST, 822.90 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 117.81 FEET, THE CHORD OF WHICH BEARS SOUTH 46 DEGREES 37 MINUTES 55 SECONDS WEST, A CHORD DISTANCE OF 106.07 FEET; THENCE NORTH 88 DEGREES 22 MINUTES 05 SECONDS WEST, 859.65 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 80.00 FEET, AN ARC DISTANCE OF 87.71 FEET, THE CHORD OF WHICH BEARS NORTH 56 DEGREES 57 MINUTES 27 SECONDS WEST, A CHORD DISTANCE OF 83.39 FEET; THENCE NORTH 25 DEGREES 32 MINUTES 50 SECONDS WEST, 990.66 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 35.29 FEET, THE CHORD OF WHICH BEARS NORTH 12 DEGREES 04 MINUTES 09 SECONDS WEST, A CHORD DISTANCE OF 34.96 FEET; THENCE NORTH 01 DEGREE 24 MINUTES 33 SECONDS EAST, 554.77 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 102.25 FEET, THE CHORD OF WHICH BEARS NORTH 40 DEGREES 27 MINUTES 59 SECONDS EAST, A CHORD DISTANCE OF 94.51 FEET; THENCE NORTH 79 DEGREES 31 MINUTES 26 SECONDS EAST, 1,493.33 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 133.09 FEET, THE CHORD OF WHICH BEARS SOUTH 49 DEGREES 38 MINUTES 21 SECONDS EAST, A CHORD DISTANCE OF 116.30 FEET; THENCE SOUTH 01 DEGREE 11 MINUTES 52 SECONDS WEST, 968.55 FEET TO THE POINT OF BEGINNING.

EXHIBIT B

SAID TRACT (AREA #1) OF LAND BEING SITUATED IN FRANKLIN COUNTY MISSOURI AND CONTAINING 2,900,779 SQUARE FEET OR 66.593 ACRES MORE OR LESS.

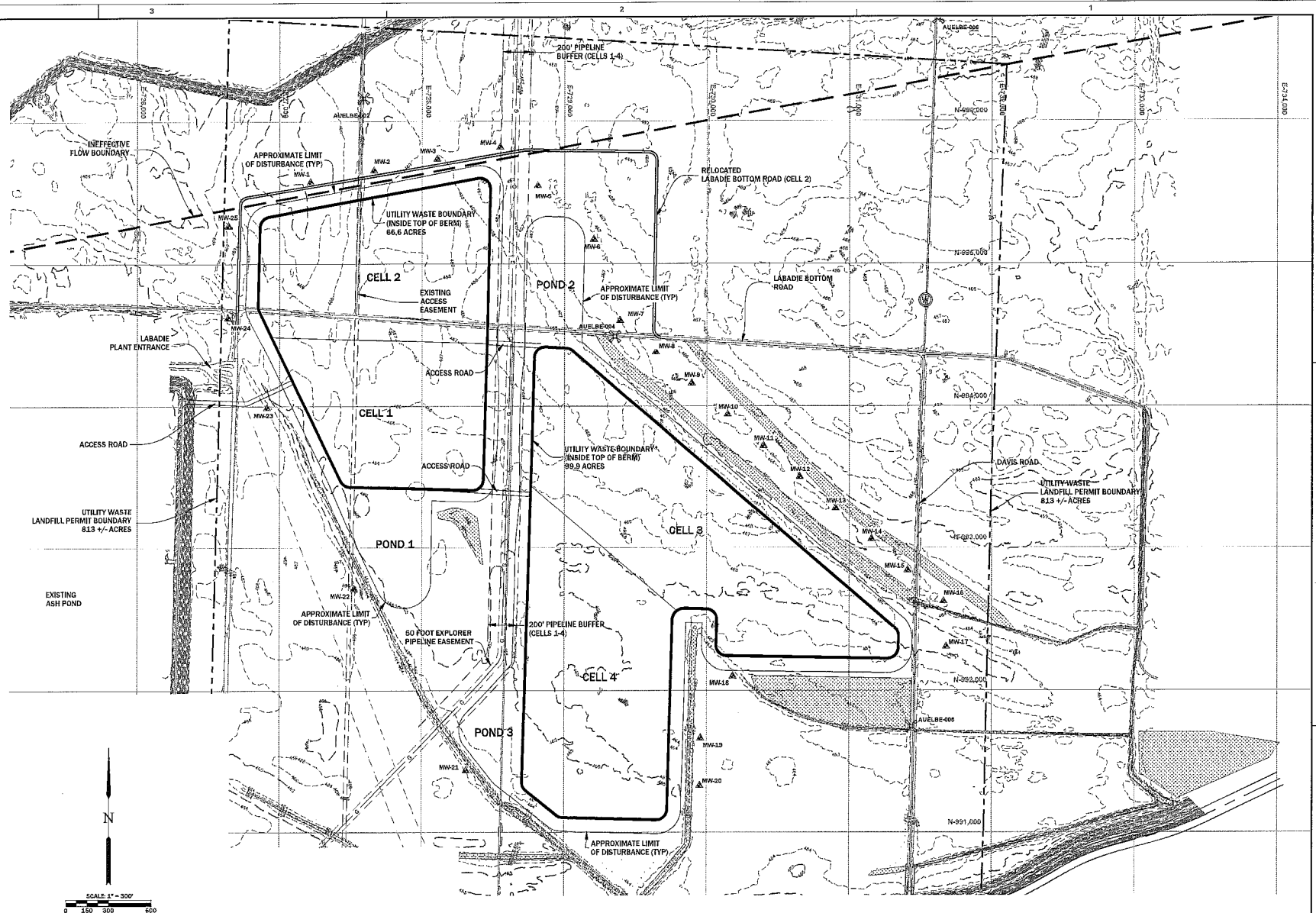
CCP WASTE BOUNDARY AREA #2

COMMENCING AT THE SOUTHWEST CORNER OF LOT 1 OF "WORTHINGTON HEIRS SUBDIVISION" AS RECORDED IN PLAT BOOK C, PAGE 25 IN THE FRANKLIN COUNTY RECORD'S OFFICE, SAID SOUTHWEST CORNER BEING ON THE NORTHERLY RIGHT OF WAY LINE OF THE CHICAGO (100' W) ROCK ISLAND AND PACIFIC RAILWAY COMPANY; THENCE DEPARTING SAID NORTHERLY LINE AND ALONG THE WESTERLY LINE OF SAID "WORTHINGTON HEIRS SUBDIVISION" NORTH 01 DEGREE 28 MINUTES 18 SECONDS EAST, 2,345.18 FEET TO THE POINT OF BEGINNING OF THE TRACT OF LAND HEREIN DESCRIBED; THENCE DEPARTING SAID WESTERLY LINE NORTH 88 DEGREES 18 MINUTES 53 SECONDS WEST, 89.99 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 87.00 FEET, AN ARC DISTANCE OF 136.91 FEET, THE CHORD OF WHICH BEARS SOUTH 46 DEGREES 36 MINUTES 13 SECONDS WEST, A CHORD DISTANCE OF 123.21 FEET; THENCE SOUTH 01 DEGREE 31 MINUTES 18 SECONDS WEST 1,327.21 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE 117.81 FEET, THE CHORD OF WHICH BEARS SOUTH 46 DEGREES 31 MINUTES 18 SECONDS WEST, A CHORD DISTANCE OF 106.07 FEET; THENCE NORTH 88 DEGREES 28 MINUTES 42 SECONDS WEST, 656.13 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 49.18 FEET, THE CHORD OF WHICH BEARS NORTH 69 DEGREES 41 MINUTES 32 SECONDS WEST, A CHORD DISTANCE OF 48.31 FEET; THENCE NORTH 50 DEGREES 54 MINUTES 22 SECONDS WEST, 275.63 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE 68.88 FEET, THE CHORD OF WHICH BEARS NORTH 24 DEGREES 35 MINUTES 49 SECONDS WEST, A CHORD DISTANCE OF 66.48 FEET; THENCE NORTH 01 DEGREE 42 MINUTES 45 SECONDS EAST, 1,709.98 FEET; THENCE NORTH 01 DEGREES 37 MINUTES 55 SECONDS EAST, 660.23 FEET; THENCE NORTH 01 DEGREES 29 MINUTES 39 SECONDS EAST, 618.66 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 120.78 FEET, THE CHORD OF WHICH BEARS NORTH 47 DEGREES 37 MINUTES 50 SECONDS EAST, A CHORD DISTANCE OF 108.15 FEET; THENCE SOUTH 86 DEGREES 13 MINUTES 59 SECONDS EAST, 145.38 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 48.51 FEET, THE CHORD OF WHICH BEARS SOUTH 67 DEGREES 42 MINUTES 08 SECONDS EAST, A CHORD DISTANCE OF 47.67 FEET; THENCE SOUTH 49 DEGREES 10 MINUTES 17 SECONDS EAST, 2991.68 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 65.97

FEET, THE CHORD OF WHICH BEARS SOUTH 23 DEGREES 58 MINUTES 22 SECONDS EAST, A CHORD DISTANCE OF 63.86 FEET; THENCE SOUTH 01 DEGREE 13 MINUTES 32 SECONDS WEST, 83.05 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 117.42 FEET, THE CHORD OF WHICH BEARS SOUTH 46 DEGREES 04 MINUTES 40 SECONDS WEST, A CHORD DISTANCE OF 105.79 FEET; THENCE NORTH 89 DEGREES 04 MINUTES 12 SECONDS WEST, 1,129.75 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS 75.00 OF FEET, AN ARC DISTANCE OF 118.58 FEET, THE CHORD OF WHICH BEARS NORTH 43 DEGREES 46 MINUTES 27 SECONDS EAST, A CHORD DISTANCE OF 106.61 FEET; THENCE NORTH 01 DEGREE 31 MINUTES 18 SECONDS EAST, 177.14 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 75.00 FEET, AN ARC DISTANCE OF 117.60 FEET, THE CHORD OF WHICH BEARS NORTH 43 DEGREES 23 MINUTES 47 SECONDS WEST, A CHORD DISTANCE OF 105.91 FEET; THENCE NORTH 88 DEGREES 18 MINUTES 53 SECONDS WEST, 60.91 FEET TO THE POINT OF BEGINNING.

SAID TRACT (AREA #2) OF LAND BEING SITUATION BEING SITUATED IN FRANKLIN COUNTY MISSOURI AND CONTAINING 4,351,083 SQUARE FEET OR 99.887 ACRES MORE OR LESS.

PRINT DIST.		
REVISIONS		
REV.	W.O.	SYM



SURVEY MONUMENTS

MONUMENT ID	NORTHING	EASTING	ELEVATION
AUELBE-001	990484.82	726569.81	467.19
AUELBE-002	996166.50	727588.30	470.70
AUELBE-003	989921.39	728508.32	467.59
AUELBE-004	994487.78	728353.29	467.02
AUELBE-005	991746.97	731438.29	462.78
AUELBE-006	996729.00	731621.70	467.67

Missouri State Plane Coordinate System Datum:
Horizontal Datum NAD 1983;
Vertical Datum NAVD 1988

NOTES TO THE CONTRACTOR

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS AT PRESENT NOT KNOWN. VERIFICATION OF THE LOCATIONS OF UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, WILL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.

THE CONTRACTOR SHALL MAKE SUITABLE AND TIMELY REQUESTS TO ALL UTILITY OWNERS, PIPELINE OWNERS, OR OTHER PARTIES AFFECTED TO HAVE ALL NECESSARY ADJUSTMENTS OF PUBLIC OR PRIVATE UTILITIES, PIPE LINES, OR OTHER APPURTENANCES WITHIN OR ADJACENT TO THE LIMITS OF

MISSOURI ONE CALL SYSTEM (DIG-IT) 1-800-344-TAN3

PERMIT DRAWINGS - NOT FOR CONSTRUCTION

THE ENGINEER WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS PURSUANT TO SECTION 27.411 (RMBC) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SCALED BY THE UNDERSIGNED ENGINEER RELATING TO OR INTENDED TO BE USED FOR ANY PART OR

REITZ & JENS, INC.
 60 WALSHAM BROOKER
 1000 COMPOSITE SQUARE WEST
 ST. LOUIS, MISSOURI 63102
 314.993.4153 FAX 314.993.4177

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

PREPARED FOR: W. AM
16550

SHEET 3
PROPOSED UTILITY WASTE LANDFILL
PROJECT OVERVIEW

LOCATION	LABADIE ENERGY CENTER	CLASS	
001009		02010	
ST. LOUIS, MISSOURI	NOVEMBER 30, 2012	REV.	0

CALL BEFORE YOU
DIG - DRILL - BLAST
1-800-344-7453
(TOLL FREE)
MISSOURI ONE CALL SYSTEM, INC.



EXHIBIT



REITZ & JENS, INC.
CONSULTING ENGINEERS

1055 corporate square drive
st. louis, mo 63132
phone: 314.993.4132
fax: 314.993.4177
www.reitzjens.com

**Ameren Missouri Labadie Power Station
Utility Waste Landfill (UWL)**

DESIGN BASIS

October 16, 2012

1. UWL Size and Volume Parameters:

- 1.1. Materials accepted = CCP (Fly ash, Bottom ash and Gypsum) **LABADIE PLANT ONLY**
- 1.2. Final (outside toe of perimeter berm including ponds) footprint = 218± acres
- 1.3. Waste boundary (inside top of perimeter berm) footprint = 167± acres.
- 1.4. Permit Boundary = 814± acres
- 1.5. Maximum height = 100 feet (el 565 NGVD)
- 1.6. Maximum side slopes = 3H:1V w/ Intermediate Bench
- 1.7. Estimated CCP to UWL (Labadie Only)
 - 1.7.1. 2015-2019 = 2.3 million CY
 - 1.7.2. Wet FGD Units 3&4 in service 2021, Wet FGD Units 1&2 in service 2026
 - 1.7.3. 2020-2024 = 2.9 million CY
 - 1.7.4. 2025-2029 = 3.6 million CY
 - 1.7.5. After 2030 = 3.8 million CY every 5 years.
- 1.8. Estimated CCP storage volumes/life

Cell Number	Waste Boundary Footprint (Ac)	Storage Volume (CY)	Estimated Life (Years)
1	30±	2.5± million	5+
2	37±	4.2± million	6+
3	55±	4.9± million	6+
4	44±	4.8± million	6+
Total	166±	16.4± million	23±

2. UWL Phases and Cell layouts

- 2.1. Cells sized for minimum 5 years
- 2.2. Each cell will be fully enclosed by exterior or temporary CCP perimeter berm
- 2.3. Cells 1&2 and 3&4 will each be a phase to allow 'phased closure' and minimize FAI per MDNR

3. Perimeter berm (For Cells and Ponds)

- 3.1. Top Elevation = 488.0
 - 3.1.1. Regulatory 100-Year (Base) Flood El = 482.92 to 483.97 NGVD (CDG Sect 56.71 to 57.38)
 - 3.1.2. 100-Year Flood Velocity at UWL = 0.82 to 1.36 ft/s
 - 3.1.3. Regulatory 500-Year Flood El = 486.49 to 487.53 NGVD (CDG Sect 56.71 to 57.38)
 - 3.1.4. 500-Year Flood Velocity at UWL = 0.78 to 1.62 ft/s
 - 3.1.5. Minimum of 3 ft freeboard above 100-Year
- 3.2. 12 foot wide gravel access road on top of berm

- 3.2.1. Min. turning radius of 60± feet at centerline, top of berm
- 3.3. Berm Side slopes
 - 3.3.1. Interior side slope = 3H:1V
 - 3.3.2. Exterior side slope=3H:1V (approved by IPRE)
 - 3.3.3. Minimum radius of 20± feet at interior toe of berm
- 3.4. Berm construction
 - 3.4.1. Exterior Berm (Permanent perimeter berm around final UWL footprint w/FCM surface) (approved by IPRE)
 - 3.4.2. Interior Berm (Temporary CCP berms w/exterior slope protection)
 - 3.4.2.1. Interior berm between cells 1&2 and 3&4 only
- 3.5. Wetlands
 - 3.5.1. Grading limits for berms, perimeter road, and fence will be at least 30 feet from any identified jurisdictional wetland
- 4. Ground water monitoring**
 - 4.1. Monitoring well locations.
 - 4.1.1. All monitoring wells will be permanent around perimeter of final landfill footprint; no interim or interior wells
 - 4.1.2. Maximum 150 meters (approximately 500 feet) from edge of final waste boundary
 - 4.1.3. Spacing based on groundwater modeling results
 - 4.2. Groundwater modeling.
 - 4.2.1.1. 2-dimensional contamination migration modeling Monitoring Analysis Package (MAP)
 - 4.2.1.1.1. Inputs based on DSI and other; documented in Appendix X
- 5. Stormwater Management**
 - 5.1. Design Storms:
 - 5.1.1. Ponds/Mass storage = 25-yr/24-hr storm (5.6 inches) per MDNR Solid Waste
 - 5.1.2. Channels/Conveyance = 25-yr/1-hr storm (2.63 inches) recommended
 - 5.2. Contact vs Non-Contact stormwater.
 - 5.2.1. All stormwater is 'Contact stormwater' during UWL operation
 - 5.2.2. All stormwater is 'Non-Contact stormwater' after partial or final closure.
 - 5.3. Stormwater Design Flows or Volumes.
 - 5.3.1. HELP Model - 3 operational conditions; Initial (7 years), Intermediate (7 years), and Closed Condition (30 years)
 - 5.3.2. Maximum Peak Daily Volume-for NPDES permitting.
 - 5.3.3. Average Annual Volume-for NPDES permitting.
 - 5.4. Stormwater Pond Design.
 - 5.4.1. Pond construction tied to Cell development
 - 5.4.2. Ponds will be outside of the Waste Boundary
 - 5.4.3. Pond 1 will be permanent. Ponds 2 & 3 will be abandoned at closure of Phase 2
 - 5.4.3.1. Permitted as wastewater treatment devices

- 5.4.3.2. Never converted to UWL for dry storage Bottom Liner
- 5.4.4. All ponds designed as 'no discharge' structures with capacity to hold 100% of 25 Yr/24 Hr design storm
 - 5.4.4.1. Pond 1 will service Cell 1 & 2
 - 5.4.4.2. Pond 2 will service Cell 3
 - 5.4.4.3. Pond 3 will service Cell 4
- 5.4.5. Top of pond berm is el 488.0 (same as UWL) with emergency spillway at el 487.0
- 5.4.6. Pond bottom no lower than minimum UWL grade
- 5.4.7. Pond Water Elevations
 - 5.4.7.1. 3 feet Minimum water in ponds to ballast liner and weed control
 - 5.4.7.2. Additional ponding required during 100-yr to counteract hydrostatic uplift
 - 5.4.7.3. Maximum ponding is 484.0 (3 feet below emergency spillway) during design storm
 - 5.4.7.4. Additional storage available in perimeter ditch during 100-yr flood
- 5.5. Stormwater Management - Operations.
 - 5.5.1. Stormwater in ponds used in site operations when possible
 - 5.5.1.1. CCP conditioning prior to placement in UWL
 - 5.5.1.2. Dust control within UWL waste limit boundaries only
 - 5.5.1.3. Process use for WFGD
 - 5.5.2. Stormwater not re-used within UWL is discharged through plant NPDES permit
 - 5.5.3. Permanent pump station for Cell 1 pond to return water to plant/ash ponds
 - 5.5.4. Temporary pumps/sumps within active cell until gravity flow can be established to perimeter ditch/pond
 - 5.5.5. Temporary pumps/sumps to convey stormwater for future ponds to Cell 1 pond
 - 5.5.6. Slight grade (instead of flat) on perimeter ditch to promote gravity drainage/minimize infiltration
 - 5.5.7. Finished UWL slope benches and letdowns similar to Sioux
- 5.6. Stormwater Management – Post Closure.
 - 5.6.1. Cell 1 pond/pump station remains operational/available. Other ponds may also remain
 - 5.6.2. Final cover and vegetation on perimeter ditch
 - 5.6.3. Letdown structures revised to discharge over the top (or through) the perimeter berm
 - 5.6.3.1. Assumes runoff from closed areas is non-contact and ultimately does not require NPDES permit

6. Leachate Management

- 6.1. Leachate collected and managed separately from stormwater
 - 6.1.1. Gravity flow to sumps adjacent to exterior perimeter berms – no vertical risers
 - 6.1.2. Collected and temporarily stored in tanks near active cells
 - 6.1.3. Located out of flood hazard area
 - 6.1.4. Renewable power (solar, wind) for leachate pumps preferred
- 6.2. Bottom slopes and grades designed to drain to perimeter of final UWL footprint with side slope risers
 - 6.2.1. Grade at top of all sumps = 468.0, lowest sump grade = 464.0
 - 6.2.2. Minimum bottom slope w/o pipe = 1%

- 6.2.3. Minimum bottom slope w/ collector pipe = 0.5%
- 6.2.4. Slope from inflection point to sump increased to 1.2 to 1.4 % to allow for differential settlement under UWL .
- 6.2.5. Bottom covered with 12 inches gravel or geonet drainage layer
- 6.3. Leachate design flows and volumes
 - 6.3.1. Based on HELP Model for Initial Operations (7 years), Intermediate Operations (7 years) and Closed Condition (30 years).
 - 6.3.1.1. Use site-specific or waste-specific parameters where readily known.
 - 6.3.1.2. Use default parameters where not known or model not sensitive
 - 6.3.1.3. Determine maximum Peak Daily Volume for leachate removal and transport design.
 - 6.3.1.4. Determine average Annual Volume for leachate storage and management.
- 6.4. Leachate Management
 - 6.4.1. Possible leachate uses during Operations
 - 6.4.1.1. CCP conditioning prior to placement in UWL
 - 6.4.1.2. Dust control within UWL waste limit boundaries only
 - 6.4.1.3. Process use for WFGD
 - 6.4.1.4. Leachate not re-used in UWL is discharged through plant NPDES permit or disposed of off-site
 - 6.4.2. Post Closure
 - 6.4.2.1. Leachate Disposed of off-site

7. Liner/Final Cover

7.1. UWL Bottom Liner

- 7.1.1. 60 mil HDPE over 2 feet of 1×10^{-7} compacted clay
 - 7.1.1.1. Alternate of HDPE over GCL over at least 1 foot of 1×10^{-7} clay
 - 7.1.1.1.1. Requires demonstration project for MDNR approval
- 7.1.2. Liner Elevations
 - 7.1.2.1. Bottom of clay 2 feet above "Natural Water Table"
 - 7.1.2.2. "Natural Water Table"= el 464 (approved by IPRE)
 - 7.1.2.3. Bottom of liner to begin at el 466 (except sump)
 - 7.1.2.4. Sumps will extend below "Natural Water Table" (Sioux demonstration)

7.2. UWL Intermediate Cover

- 7.2.1. Top = 12 inches soil over CCP (CCP only not acceptable)
- 7.2.2. Sides = 12 inches soil over CCP
 - 7.2.2.1. Alternate to consider 12 inches soil over GCL
 - 7.2.2.1.1. May require demonstration project for MDNR approval

7.3. UWL Final cover

- 7.3.1. Top = 24 inches soil over 40 mil HDPE
- 7.3.2. Sides = 24 inches soil over 40 mil HDPE
 - 7.3.2.1. Evaluate stability of 24 inches soil over 40 mil double textured HDPE (in geotech rpt)
 - 7.3.2.2. Include geomembrane strength and stability calculations in CPA (GER)

7.3.2.3. Include stability analysis for GCL option

7.4. Pond Bottom Liner

7.4.1. Liner 60 mil HDPE over 2 feet of 1×10^{-7} compacted clay

7.4.1.1. Alternate of HDPE over GCL over at least 1 foot of 1×10^{-5} clay

8. Miscellaneous

8.1. Soil material source

8.1.1. Liner quality clay – off-site

8.1.1.1. Currently identified to come from Callaway site (deed restricted)

8.1.1.2. Contractor may propose alternate site(s)

8.1.2. Miscellaneous soil fills – off-site by contractor

8.1.3. Vegetative cover – stripped during cell construction and stockpiled on site

8.2. Site Access

8.2.1. 24 foot wide haul road with shoulders and guardrails from ash pond berm to Cell 1 and Cell 1 to Cell 3

8.2.1.1. Road at 100-year flood plus 2 feet (el 486.0)

8.2.1.2. Minimum turning radius = 110 ft at centerline, top of berm

8.2.1.3. Clearance under power lines must be addressed

8.2.1.4. Bridge/culvert required to keep Labadie Bottom Road Open

8.2.1.5. Explorer pipeline must approve road fill over gas main

8.2.2. Access to cells on top of berms or temporary roads within UWL limits

8.2.3. 12 foot wide gravel access road at toe of berm with 7 foot high perimeter fence and gates

8.3. CCP Transportation Methods

8.3.1. Initially - ponded CCPs removed from ash ponds and trucked to UWL in batches

8.3.2. Long term - Dry CCPs conditioned (at UWL or plant) and trucked to final location for disposal

8.4. Operating Hours

8.4.1. 24/7 per Tom Hollenkamp 06/29/12

9. Permits/Approvals (responsibility)(status)

9.1. Required for UWL concept approval

9.1.1. MDNR Preliminary Site Investigation (approved)

9.1.2. MDNR Detailed Site Investigation (approved)

9.1.3. Franklin County zoning (Ameren) (approved 10/25/11)

9.1.4. USACE Jurisdictional Wetland Determination (Ameren/RJ) (finalized 9/10/12)

9.1.5. Franklin County Floodplain Development permit (Ameren/CDG) (application submitted)

9.1.6. East Central SW Management District recommendation (Ameren/RJ)

9.1.7. MDNR Plant NPDES permit modification (Ameren)(submitted in 2011)

9.1.8. MDNR air permit - Determine if required (Ameren)

9.1.9. MDNR UWL Construction Permit (Ameren/RJ)

9.1.10. Franklin County UWL Construction Permit (Ameren/RJ)

9.2. Required to begin UWL construction

- 9.2.1. MDNR UWL Construction Permit (Ameren/RJ)
- 9.2.2. Franklin County/MDNR Land Disturbance Permit (Ameren/RJ)
- 9.2.3. NPDES Wastewater Treatment Device Construction permit for ponds (Ameren/RJ)
- 9.2.4. Franklin County Mechanical/Electrical/Building permit for pump station and leachate tanks (Ameren/RJ)
- 9.3. Required for UWL operation
 - 9.3.1. MDNR UWL Operating permit (Ameren/RJ)
 - 9.3.2. Franklin County UWL Operating permit (Ameren/RJ)
 - 9.3.3. Modification of Plant NPDES permit for UWL stormwater(Ameren)
 - 9.3.4. NPDES permit modification for pond emergency overflow spillways, if required (Ameren)
 - 9.3.5. MDNR Air Pollution Control permit for dust control, if required (Ameren)

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FRANKLIN COUNTY

PLANNING & ZONING DEPARTMENT
PUBLIC WORKS DIVISION



400 EAST LOCUST STREET
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August 21, 2012

Union Electric Co.
d/b/a Ameren Missouri
1901 Chouteau
St. Louis, MO 63103

Re: Zoning Verification – Ameren Labadie Plant

To Whom It May Concern:

Mr. Tim Tryniecki of Armstrong Teasdale has requested that this office provide you with zoning information for the property located along the Labadie Bottom Road in Labadie, MO. This property is further identified by parcel numbers 08-4-17.0-0-002-004.000, 08-4-17.0-0-000-003.000, 08-4-17.0-0-000-002.000, and 08-4-17.0-0-001-001.000. The zoning description for the property is Agricultural Non-Urban (ANU). By virtue of the use currently made of the property and Franklin County Zoning Regulations, constructing and operating a utility waste landfill on the subject property is a permitted use subject to compliance with all County, State and Federal regulations regarding utility waste landfills and all other applicable regulations.

You have indicated that Ameren would like to establish a utility waste landfill on the subject property. As state above, such use is permitted subject to compliance with all applicable laws and regulations. In accordance with the County regulations regarding utility waste landfills, all plans must be pre-approved by the Independent Registered Professional Engineer selected by the County for such purpose. For the purpose of this stage of the project, Andrews Engineering will serve in such capacity. Please insure that you coordinate all activity with this firm.

If you have any questions regarding this letter, please contact the Planning and Zoning office at 636-583-6369.

Sincerely,

Mrs. Scottie C. Eagan
Planning Director

Cc: Kenneth Liss - Andrews Engineering
Joe Feldman

EXHIBIT

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