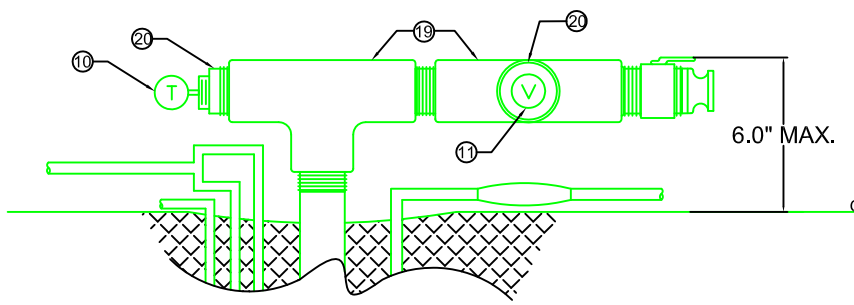
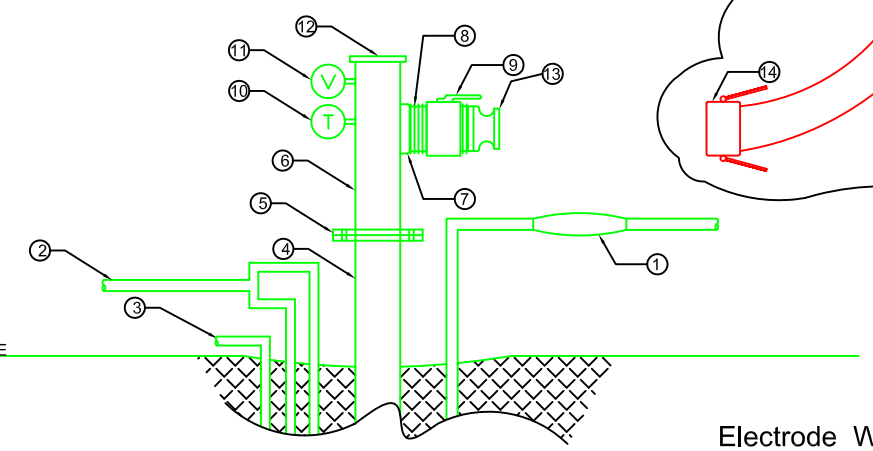
Electrode Well surface connections with Upper Vapor Extraction Detail South of Railway tracks. Extraction well locations XE204, XE205, XE206, & XE207.

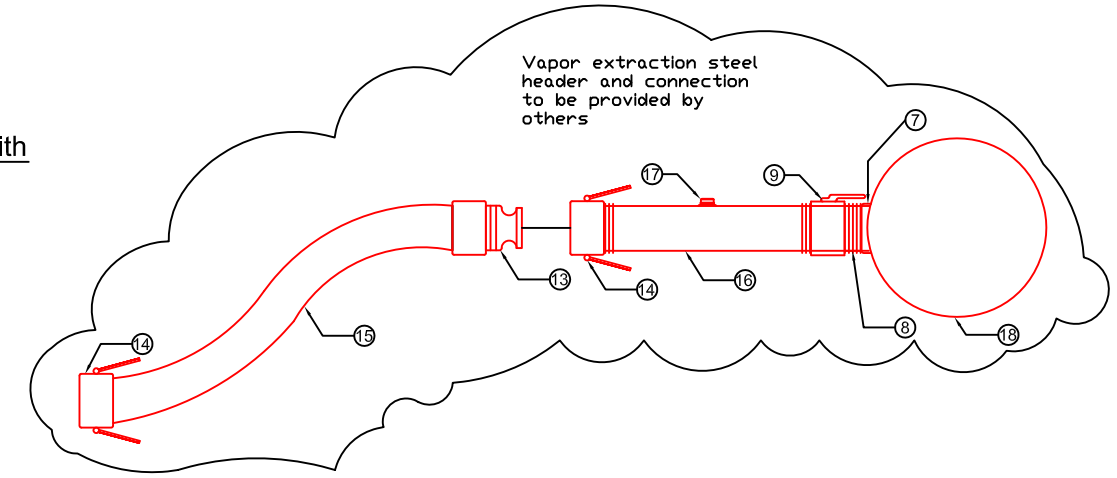
(Connections for one Electrode Shown)



Electrode Well surface connections with Upper Vapor Extraction Detail

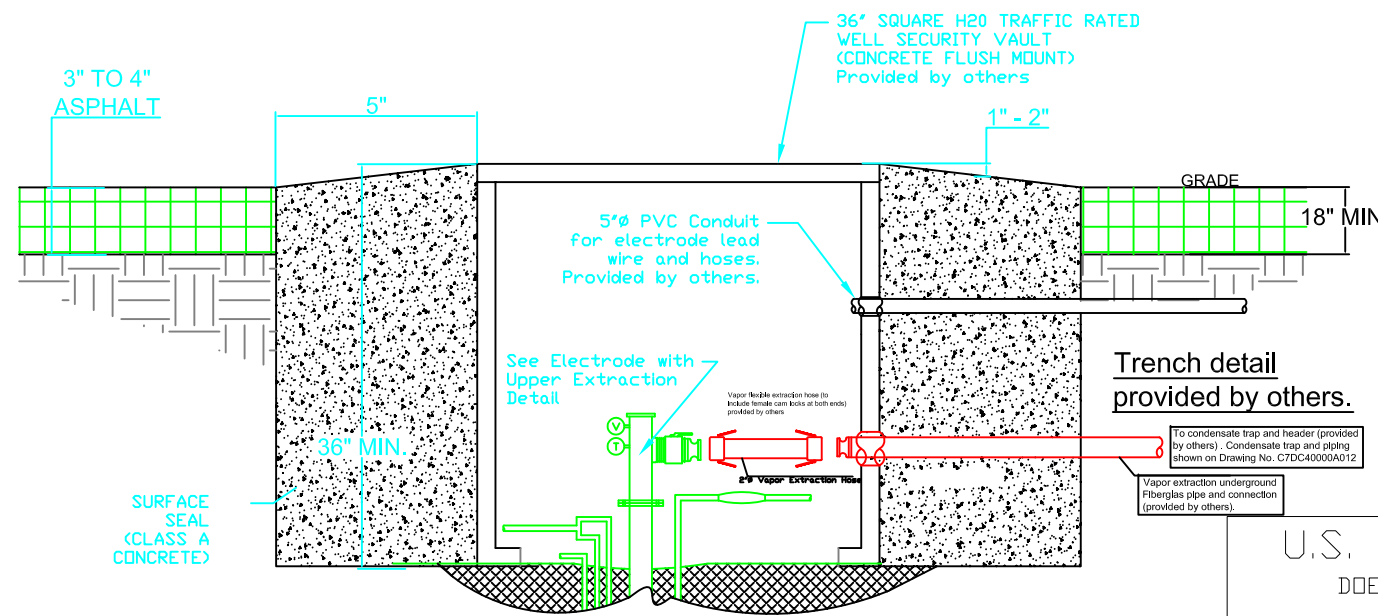
(Connections for one Electrode Shown)



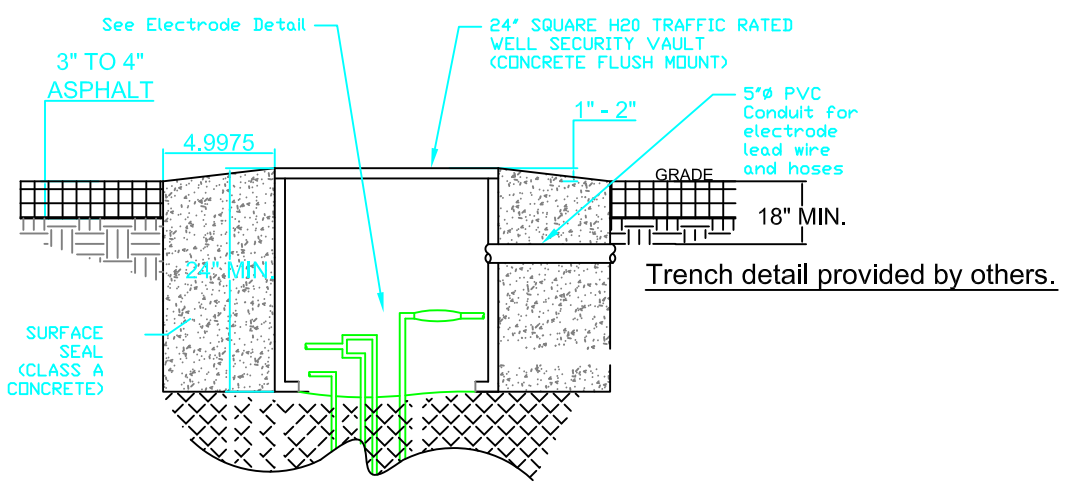


Electrode Well connections with Upper Vapor Extraction Detail within Vault. Electrode Wells No. E224 U-SMD & E231 U-SMD

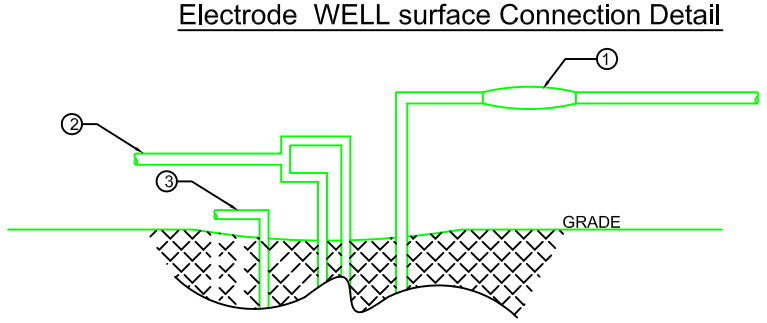
(Connections for one Electrode Shown)



Electrode WELL Connection within Vault. Electrode Wells No. E216 U-SMD & E223 U-SMD



Electrode WELL surface Connection Detail



Notes:
1) Unless other wise stated pipe threads will meet or exceed ANSI B1.20.1 requirements.
2) All parts will meet or exceed a standard specification of Schedule 40.
3) Pitot tube will be installed on vapor line for flow measurement and sampling.
4) Dielectric coating will be applied, as required to reduce step and touch potentials to less than 15 volts.
5) If connected as a vapor extraction well, vapor connections same as multi-phase well.
6) For wellheads in a vault, vacuum gauge located on side.

Electrode / Upper Vapor Extraction WELLHEAD COMPONENTS

Description/Material

1. Electrode power cable 3 per well / #2AWG Bostrig or Exane wire connected with
   - Butt Splice / #2 AWG crimped or inline splice.
   - Insulated with rubber splicing tape and electrical tape.
2. Water Injection Lines 3 per well / 3/8" EPDM rubber hose.
   - Feed from WCS units.
   - Connected with Barbed T fitting.
3. Water Return line 1 per well / 3/8" EPDM rubber hose.
   - Connected to liquid return line to treatment system.
   - Connected with Barbed hose mender fitting and check valve.
4. 2" Ø Fiberglass Well Casing / Details shown in drawing #C7DC40000C005.
5. 2" Ø Flange or coupler / Galvanized Steel.
6. 2" Ø Well Head / STD Seamless Steel Pipe A106 GRB B.E.
7. 2"X4"-36 FS Threaded Pipe O -Let / CL 3000 A105N
8. 2" (Length will have to adjusted per Extraction Location) Nipple / Galvanized Steel.
9. 2" Ball Valve / Brass Alloy.
10. Temperature Gage / 0-250°F
11. Vacuum Gauge / 0-30 inHg.
12. 2" Ø Well Cap / Galvanized Steel.
13. 2" Male Cam X 2"F NPT / CamLock Aluminum Steel.
14. 2" Female Cam X 2"F NPT / CamLock Aluminum Steel.
15. 2" MWH Vapor Extraction Hose /Temperature (Operating Temperatures: -40°F to 200°F (-40°C to 93°C)), 150psi pressure rated, chemical, UV rated (Cover: Black Neoprene) / or equivalent chemical, temperature and pressure hose.
16. 2" X 3' MM Flow and Sample tube / STD Seamless Steel Pipe A106 GRB B.E .
17. 1/2" X3/4" Flow and Sample port / FS Threaded Pipe O -Let CL 3000 A105N
18. Vapor Conveyance Pipe / TBD by others.
19. 2"F X 2"F X 2"F Tee / Galvanized Steel.
20. 2"M X 1/2"F Reducer bushing / Galvanized Steel.

Legend:
1) M - represents Male NPT
2) F - represents Female NPT.
3)FF - represents Female by Female NPT.
4)MM - represents Male by Male NPT.
5)FS - represents Female NPT by Socket.
6)TBD - To Be Determined

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

LATA Environmental Services of Kentucky, LLC
managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC30-10CC40020
Paducah, Kentucky

McMillan-McGee Corp
CALGARY, ALBERTA CANADA
(403) 279-7948
FAX (403) 272-7201

DOE CONTRACT NO. DE-AC30-10CC40020

PROJECT NAME:
Paducah PGDP C-400 Remediation Project

TITLE:
C-400 Complex
Detail Drawing of Wellheads
for ET-DSP Electrode Locations

CAD FILE NAME	BUILDING	PLANT	CLASS
Mc2-Paducah-ElectrodeWellheadDetails.DWG	C-400	PGDP	U

SCALE:	DRAWING NUMBER	REV
Not To Scale	C7DC40000C008	C

LPE

DATE

PROFESSIONAL SEAL

REV.	DATE	DESCRIPTION	DRAWN BY	DRAFT CHK	ORG/	LEAD ENGR	QA	CONF CTRL/ NUCL SFTY	FAC MGR	PROJ ENGR
C	05/01/12	Technical Edits	WR	ER	ER	BM				
B	19/06/11	Technical Edits	WR	PP	ER	BM				
A	28/05/11	Separate Wellhead Drawing-Electrodes	WR	PP	ER	BM				

DRAWING REVISIONS