

GEVARENBRONNENLIJST EVD

VOF ZUIDWENDING

Nummer: A-436-EA-000-011 blad 1 v	Datum wijziging: 2014-02-28	Wijz.nr. 6	Engineer: 5.1.2. e	Afd.	Par.	Goedkeuring:	Afd. 5	Par.
Beherende afdeling: TNE / TNI			Bijbehorende locatie 1: ZUIDWENDING		Bijbehorende locatie 2:			
TITEL: GEVARENBRONNENLIJST EVD VOORBLAD VOF ZUIDWENDING								
Status								
Gasunie	Beh./onderh. JA	Subloc/Geb.code -	Form. A4	Nummer:				Wijz.nr.

Toelichting gevarenbronnenlijst			Referentiedocumenten				
MEDIUM	GASGROEP	TC (Temperatuurklasse waaraan Ex-materiaal moet voldoen)	OMSCHRIJVING	DOCUMENTNAAM	REFERENTIE	REV.	DATUM
A = Aardgas	IIA	T1	Inventarisatie van brandbare stoffen	Diverse ontwerp GTS'en			■
Cd = Condensaat	IIA	T3	Inventarisatie potentiële lekbronnen	Diverse ontwerp GTS'en			
LNG = Vloeibaar methaan	IIA	T1	Inventarisatie genomen maatregelen	Diverse ontwerp GTS'en			
M = Methaan	IIA	T1	Classification list	Classification list	A-436-EA-000-003	Laatste	
MT = Methanol	IIA	T2	Apparatenlijst HVAC			Laatste	
So = Smeerolie/aardgas	IIA	T1	Afsluiterlijst L/WTB			Laatste	
THT = Odorant	IIA	T3	Apparatenlijst L / WTB	Master equipment List	VOF/MM/225100/EN/ME/101	Laatste	
			Instrumentenindex	Instrument list	A-436-MA-000-515	Laatste	
			Apparatenlijst Kleine Lokatie			Laatste	
			Apparatenlijst E	Apparatus List Electrical	A-436-EA-000-004	Laatste	
			Bedrijfsnoodplan	BNPxx reeks			
			GTS Explosieveiligheid	OSA-06-N		11	
			Diverse beoordelingen (EExe-motoren, EExi-circuit, ventilatievoud gebouwen, afwijkende gevarenzones), Ex-certificaten, CE-verklaringen, verklaringen afd. veiligheid.	diverse lijsten	zie hierboven		
Opmerkingen			Referentietekeningen				
Afkortingen: C = continu M = meter P = primair S = secundair S* = secundaire bron(nen) in matig geventileerde ruimte, dit betekent zoneverzwaring, dus zone 1. S** = secundaire bron(nen) met bewaakte ventilatie, geen zoneverzwaring, dus zone 2. V = puntafzuiging met ventilatiecondities, plaatselijk gezoneerd, ruimte is niet gezoneerd. Binnen een zone 2 gebied met het medium aardgas zijn de bronnen met een bronhoogte <= 3 en met een straal <= 10m niet vermeld. Bij handbediende bronnen is de straal tussen haakjes weergegeven. De hoogte van een zone 2 bron of gebied is in praktisch opzicht oneindig hoog gehouden. Tenzij dit expliciet anders staat vermeld. Dieselolie toegepast bij Gasunie hoeft niet te worden gezoneerd.			OMSCHRIJVING		TEKENINGNUMMER	REVISIE	DATUM
			Hazardous area classification layout Typical for all Caverns		A-436-EO-000-002	laatste	
			Hazardous area classification layout zuidwending		A-436-EO-001-001	laatste	
			Hazardous Area Classification (P7617-PC-HAC-001)		436-XX-45140673-001-002	laatste	
			Zonering figuren		S-EO-001-XXX	laatste	

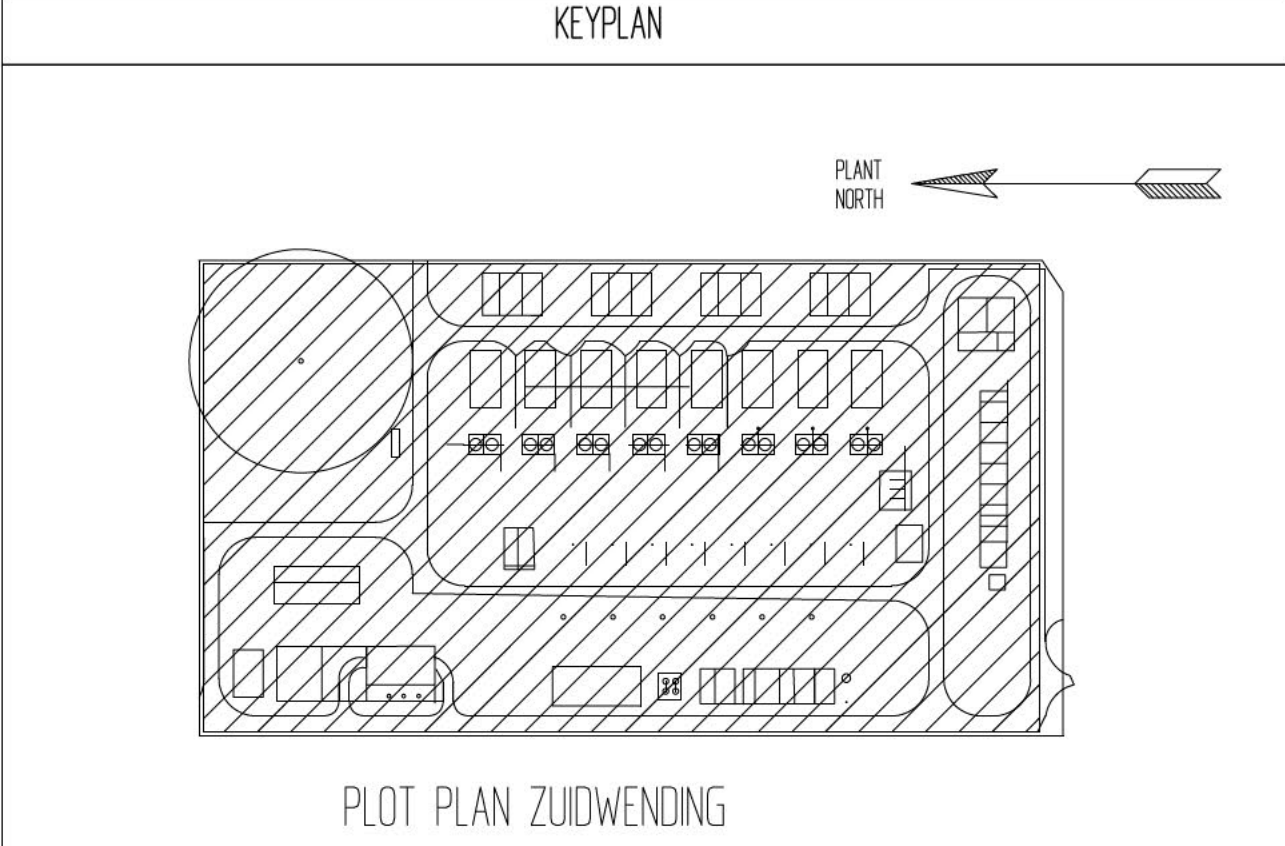
GEVARENBRONNENLIJST

VOLGNR. BRON	TAGNR./OMSCHRIJVING BRON	Medium	Soort bron (OSA-06-N)	Zone	Nom. diam. mm of "	Beginhoogte van de zone	Bron- hoogte (m)	Straal tot 3 m hoogte	Max. straal (m)	Max. druk (bar)	Standaardzonering		Entry Matrix A, B
											Fig.nr.	DIS-nr.	
1	COMPRESSOR BUILDING 01C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
2	COMPRESSOR BUILDING 02C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
3	COMPRESSOR BUILDING 03C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
4	COMPRESSOR BUILDING 04C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
5	COMPRESSOR BUILDING 05C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
6	COMPRESSOR AFTERCOOLER AREA	A	S	2	-	MAAIVELD	-	1	1	170	-		
7	METERING BUILDING 10R ANALYSER VENT 1	A	C	0	-	MAAIVELD	6	1	1	-	103		
8	METERING BUILDING 10R ANALYSER VENT 2	A	C	0	-	MAAIVELD	6	1	1	-	103		
9	METERING AREA VENT 1(HAND OPERATED)	A	S	2	DN80	MAAIVELD	6	20	(20)	80	952		1, 3
10	METERING AREA VENT 2(HAND OPERATED)	A	S	2	DN80	MAAIVELD	6	20	(20)	80	952		1, 3
11	METERING AREA VENT 3(HAND OPERATED)	A	S	2	DN80	MAAIVELD	6	20	(20)	80	952		1, 3
12	METERING AREA VENT 4(HAND OPERATED)	A	S	2	DN80	MAAIVELD	6	20	(20)	80	952		1, 3
13	MOBILE SCRAPER AREA GASUNIE TRANSPORT LINE	A	S	2	-	MAAIVELD	0,5	1	(2)	-	032		
14	ANALYZER AT-55101 IN GLYCOL CONTACTOR AREA	A	C	0	12 mm	MAAIVELD	1,6	1	1	-	103		
15	ANALYZER AT-56101 IN GLYCOL CONTACTOR AREA	A	C	0	12 mm	MAAIVELD	1,6	1	1	-	103		
16	METHANOL INJECTION PUMPS P75x01	MT	S	2	-	MAAIVELD	0,8	1	2	180	035		
17	GLYCOL CONTACTORS	A	S	2	-	MAAIVELD	0,8	1	1	58	-		Hold
18	PRODUCTION GAS HEAT EXCHANGERS E-51101	A	S	2	-	MAAIVELD	0,8	1	1	69	026		
19	GAS RECEIVING STATION 01B (GAS VENT)	A	S	2	DN50	MAAIVELD	6	5	5	-	029		5, 2
20	GAS RECEIVING STATION 01B	A	S	1	-	MAAIVELD	-	-	-	-	-		
21	DRAINS TANK	So, MT	P	1	-	MAAIVELD	1,2	1	1	-	PR-7910		Hold
22	METHANOL STORAGE DRUM V-75001	MT	S	2	-	MAAIVELD	1,2	1	1	1,5	036		
23	GROUND FLARE A-71001 (Afsluiters regelpaneel)	A	AG	2	-	MAAIVELD	1,2	1	1	-	026		Hold
24	VENT STACK AS-79001	A	P	1	-	31	45	-	45	-	028		
25	VENT KO DRUM V-79001 AREA	A, Cd	S*	1	-	PUT	1,2	1	-	-	-		
26	INLET SEPARATOR AREA	A	S	2	-	MAAIVELD	1,2	1	2	180	032		
27	GAS METERING AREA	A	S	2	-	MAAIVELD	1,2	1	1	-	026		
28	MOBILE SCRAPER AREA FLOW LINES	A	S	2	-	MAAIVELD	0,5	7	14	-	026		
29	PROCESS DRAIN VESSEL V-74001	Cd	S	2	-	MAAIVELD	1,2	1	2	1,5	036		
30	V-75001 TANK UNLOADING BAY	MT	S	2	-	MAAIVELD	0,5	1/(7)	2/(14)	-	034		
31	V-74001 TANK LOADING BAY	Cd	S	2	-	MAAIVELD	0,5	1/(7)	2/(14)	-	034		
32	GLYCOL VESSELS V-72001 & V-72002	A	S	2	-	MAAIVELD	-	1	1	5	026		
33	Cancelled						-						
34	COMPRESSOR BUILDING 06C	A	S	2	-	MAAIVELD	-	1	1	170	N.A.		
50	SCRAPER AREA	A	S	2	-	MAAIVELD	0,5	1	1	-	026		

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VOLGNR. BRON	TAGNR./OMSCHRIJVING BRON	Medium	Soort bron (OSA-06-N)	Zone	Nom. diam. mm of "	Beginhoogte van de zone	Bron- hoogte (m)	Straal tot 3 m hoogte	Max. straal (m)	Max. druk (bar)	Standaardzonering		Entry Matrix A , B
											Fig.nr.	DIS-nr.	
51	WELL A	A	S	1, 2	-	PUT	1.5	1/(7)	7	16	-		
52	WELL B	A	S	1, 2	-	PUT	1.5	7	7	180	-		
53	Cancelled												
54	Flanges in Well site Methanol Line	MT	S	2	-	Flens	1	1	1	180	026		
55	Flanges in Well site Natural Gas Line	A	S	2	-	Flens	1	1	1	180	026		



1. ALL DIMENSIONS, ELEVATIONS, COORDINATES & MATCH LINES IN MILLIMETERS
2. PLANT ELEVATION SHALL BE 500+ HEIGHT POINT OF INTERSECTION AND EQUALS <50mm.
3. FERN LEAVING PLANT, INSULATION TYPED SEE DWG. 4-A-36-01-00-01
4. FEEDER CABLES SHALL BE 10KV/11KV CABLES SEE RELATED POWER LAYOUT DRAWINGS NO. 4-A-36-01-00-01
5. FINAL LOCATIONS SHALL BE VERIFIED BY THE ELECTRICAL SUPERINTENDENT AND SHALL BE ADJUSTED TO SUIT SUCH CONDITIONS.
6. ALL ELECTRICAL CONNECTIONS/TERMINATIONS IN THE TUNNEL SHALL BE ALUMINUM ALLOY MATERIAL. HOWEVER, CABLE SIZING SHALL BE IN ACCORDANCE WITH THIS DOCUMENT IN ANY CASE.
7. AN ADDITIONAL CORDING PLANT WILL BE REQUIRED FOR CABLES RATING TO BE EQUIVALENT TO EQUIVALENT PROVIDED FOR THE CABLES TO BE USED.
8. NORMAL LEAVING CONNECTIONS BEHIND THIS PHASE CORDING, 400/230V MAX. PER 100 METER LEAVING CORDING. - A RELATIVE DROP OF 5% MAXIMUM AND A SHORT CIRCUT CURRENT BEING ADJUSTED TO BE 10% OF THE CABLE RATING.
9. THEY TO DOCUMENT NO. 4-A-36-01-00-01 FOR CABLE DUTY OF THE DISBURSEMENT IN 1901
10. UNDESIRABLE TYPES OF ACTION BOXES, LIGHTING FIXTURES AND OUTLETS SHALL BE REJECTED WITH STOP PLUGS.
11. OUTDOOR LIGHTING & PROTECTIVE COORDINATION WITH MANUAL OPERATOR STOP BOTTOM LIGNING IN THE BUILDING FOR POWER SUPPLY SHALL BE DRAWING NO. 4-A-36-01-00-01
14. ALL STREET LIGHTING SHALL BE IN AREA'S SHOWN SEE FERN FOR DISTRIBUTION BOARD NO. 1901 LOCATED IN THE PRODUCTION FACILITIES BUILDING 19.
15. THE SPAN DISTANCE BETWEEN TWO ADJACENT LIGHTING FIXTURES & 6 METERS UNLESS OTHERWISE NOTED.
16. THE STREET LIGHTING FIXTURES LOCATED UNDER TUNNEL LIGNING ARE REPEATED BY FLOODING. LIGHTING FIXTURES SHALL BE 100% OF THE TUNNEL LIGNING AREA. IF THERE ARE MORE THAN 10% OF THE TUNNEL AREA TO BE DRAWING NO. 4-A-36-01-00-02

The diagram shows a vertical street lighting pole with several fixtures. From top to bottom, the fixtures are: a square luminaire, a circular luminaire, a circular luminaire, a circular luminaire, and a circular luminaire. To the right of the pole, there are five symbols in a column, each with a corresponding label: a square symbol for 'SUB LIGHTING JUNCTION BOX', a circle with a cross for 'STREET LIGHTING POLE', a square with a cross for 'SAFETY SWITCH', a circle with a cross for 'SEQUENCE NUMBER', and a circle with a cross for 'LIGHTING FIXTURE INSTALLATION DETAIL'. Below the pole, there are three labels: 'PHASE IDENTIFICATION', 'CIRCUIT NUMBER', and 'LIGHTING DISTRIBUTION BOARD NUMBER'. At the bottom, there is a label 'LIGHTING DISTRIBUTION BOARD NUMBER'.

FLUORESCENT LIGHTING FIXTURE

CONNECTED TO EMERGENCY CIRCUIT

CONVENIENCE OUTLET 15A

MAIN LIGHTING JUNCTION BOX

SUB LIGHTING JUNCTION BOX

STREET LIGHTING POLE

SAFETY SWITCH

SEQUENCE NUMBER

LIGHTING FIXTURE INSTALLATION DETAIL

LIGHTING FIXTURE MOUNTING HEIGHT FROM GRADE IN MM

THIS NUMBER

PHASE IDENTIFICATION

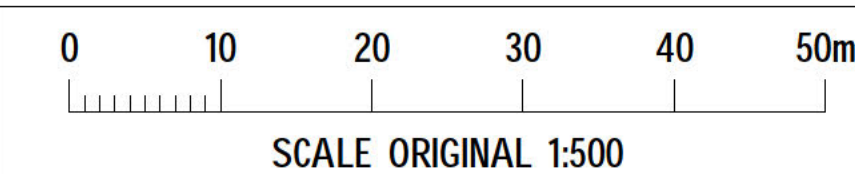
CIRCUIT NUMBER

LIGHTING DISTRIBUTION BOARD NUMBER

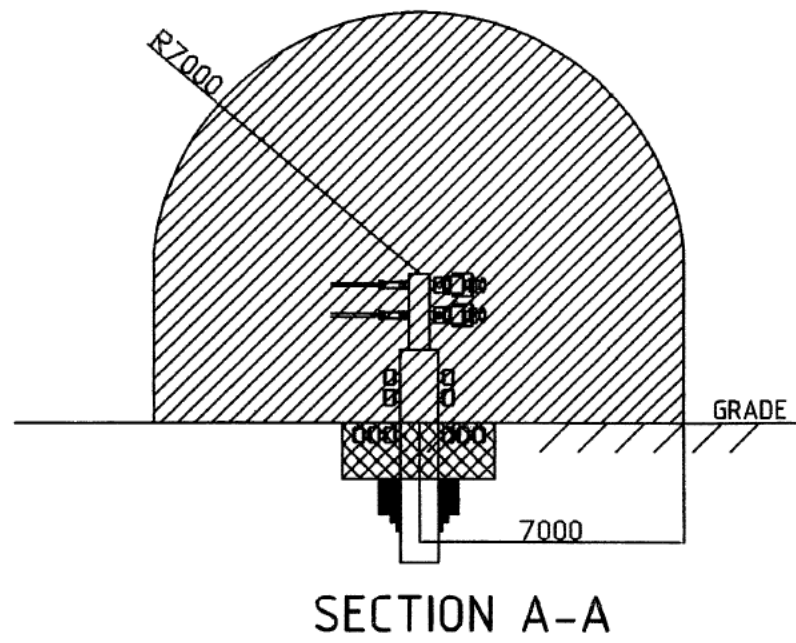
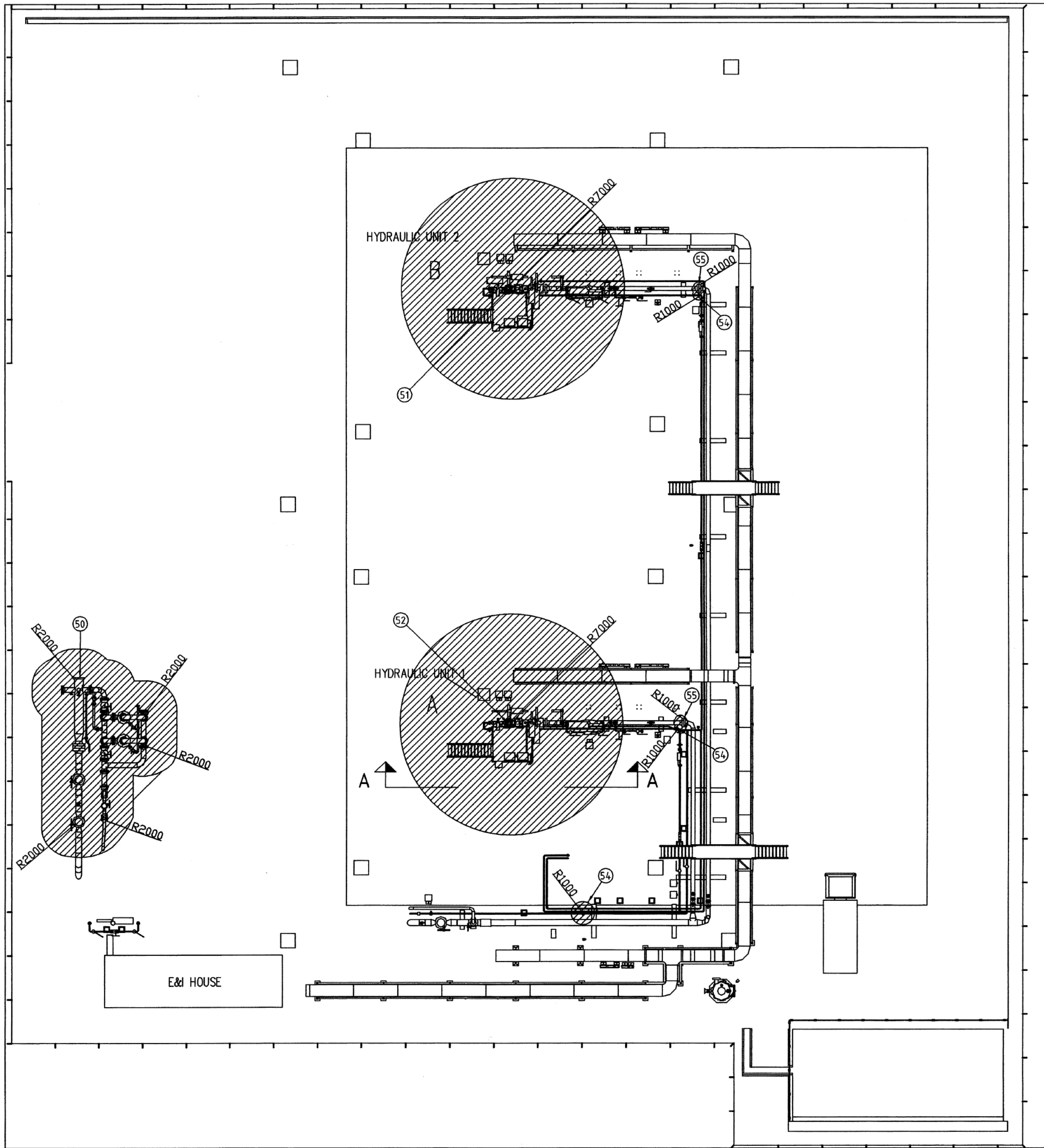
LIGHTING DISTRIBUTION BOARD NUMBER

REFERENCE DRAWINGS	
DESCRIPTION	DRAWING NUMBER
LIGHTING DETAILS	A-436-ED-000-702
KEY PLAN POWER LAYOUTS	A-436-ED-000-700
KEY PLAN LIGHTING LAYOUTS	A-436-ED-000-701
PILOT PLAN	A-436-ED-000-004
CREDIT LINE DIAGRAMS (DISTRIBUTION BOARD NL-1801)	A-436-ED-180-056
SINGLE LINE DIAGRAMS NL-1801	A-436-ED-180-054
LIGHTING AND SMALL POWER LAYOUT FOR TANKER LOADING AREA	A-436-ED-A02-701

BUILDINGS' SCHEDULE			
No.	DESCRIPTION	No.	DESCRIPTION
01H	MAIN BUILDING	02N	HOT WATER BOILER BUILDING
01G	GENERATOR BUILDING	01B	FUEL GAS CONDITIONING BUILDING
01/04R	VSDS BUILDINGS	12R	DELETED
11R	PRODUCTION GAS UTILITIES BUILDING		
10C	COMPRESSOR CONTAINER		
10E	PSU CONTAINER		
10P	ELECTROLYSER CONTAINER		
10R	METERING BUILDING		
01	DELETED		
01/05C	COMPRESSOR BUILDINGS		
01E	SUBSTATION		
01N	REGENERATOR BUILDING		



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NOTES

- THIS DRAWING IS BASED ON THE FOLLOWING CODES, STANDARDS AND SPECIFICATIONS:
 - NPR 7910-1 "GEVARENZONE-INDELING MET BETREKKING TOT ONTPLOFFINGSGEVAAR - DEEL 1: GASONTPLOFFINGSGEVAAR, GEBASEERD OP NEN-EN-IEC 60079-10: 2003 JULI 2008 ISSUE.
 - NEN-EN-IEC 60079-10 "ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES, PART 10: CLASSIFICATION OF HAZARDOUS AREA'S. 2003
- ELECTRICAL EQUIPMENT IN HAZARDOUS AREA'S SHALL MEET THE HEAVIEST CLASSIFICATION REQUIREMENTS I.E. SUITABLE FOR GAS GROUP IIA (NATURAL GAS) AND TEMPERATURE CLASS T3.
- REFER TO GTS-FIG-952 FOR THE CLASSIFICATION AROUND THE VENTS.
- THIS CLASSIFICATION DRAWING SHALL BE USED FOR ALL CAVERN AREA 'S.
- GAS OPERATION.

LEGEND

- | | |
|--|----------------------|
| | ZONE 0 |
| | ZONE 1 |
| | ZONE 2 |
| | NON HAZARDOUS AREA |
| | HAZARD SOURCE NUMBER |

REFERENCE DRAWINGS

DRAWING NUMBER	DESCRIPTION
A-436-EA-000-003	AREA CLASSIFICATION LIST
A-436-EA-000-011	GEVARENBRONNENLIJST ELECTRO

Rev	Date	Drawn	Description

Project
aardgasbuffer

Zuidwending

TITLE
HAZARDOUS AREA
CLASSIFICATION LAYOUT
TYPICAL FOR ALL CAVERNS

