BID INSTRUCTIONS

متطلبات المشاركة في المزاد

Revision 1.0

Auction of Yanpet retired assets in closed envelopes	**مزاد شركة ينبت لبيع المعامل بالأظرف المغلقة**

Auction Dates		**مواعيد المزاد**	
Last Day for Site visits & Inspection	15 May 2025	Thursday	اخر يوم لمعاينة الموقع
Last Day to Submit Bids by closed Envelops	29 May 2025	Thursday	أخر موعد لتقديم العطاءات بواسطة الاظرف المغلقة
Bids Open Date	02 June 2025	Monday	تاريخ فتح العطاءات
Announce Bids results	18 June 2025	Wednesday	اعلان نتائج العطاءات
Bids by closed Envelops to be submitted to the following address:		تسلم العطاءات بالأظرف المقفلة الى العنوان التالي:	
Warehouse Integration Network Company EVT (Engineering Valley Tower) 12th Floor, Building # 3072, Postal Code 35525 AL Madinah Al Munawara Street, Jubail City, Saudi Arabia M: +966 (0) 56 620 0620 T: +966 (0) 13 347 9300 F: +966 (0) 13 347 9301		**شركة المخازن المتكاملة المحدودة:** برج وادي الهندسة، الطابق 12 مبنى رقم 3072 الرمز البريدي 35525 شارع المدينة المنورة، مدينة الجبيل، المملكة العربية السعودية جوال: +966 (0) 56 620 0620 هاتف: +966 (0) 13 347 9300 فاكس: +966 (0) 13 347 9301	

Introduction	**مقدمة**
Saudi Yanbu Petrochemical Company (Yanpet), a subsidiary of SABIC, in cooperation with Warehousing Integrated Company (WIN), is pleased to organize an auction for the sale of Yanpet's Retired Plant in closed envelopes.	يسر شركة ينبع السعودية للبتروكيماويات (ينبت)، إحدى الشركات التابعة لشركة (سابك) وبالتعاون مع شركة المخازن المتكاملة المحدودة أن تعلن عن تنظيم مزاد لبيع المصانع المقفلة التابعة لها بالأظرف المغلقة.
the sale includes demolition, removal, and transportation outside the site within 2 to 3 months.	والبيع يشمل الهدم والإزالة والنقل إلى خارج الموقع من 2 إلى 3 أشهر.
The Retired assets offered for sale are not guaranteed for condition, quality or quantity, and therefore inspection and preview is the basis of the sale.	الوحدات والمواد المعروضة للبيع ليست ضمانا للحالة أو الجودة أو الكمية، وعليه الفحص والمعاينة هو أساس البيع.
To arrange an appointment to visit the site for inspection and for more details to know the terms and conditions of sale, please contact the organizer Warehouse Integration Network Company (WIN) on below contacts	لترتيب موعد لزيارة الموقع للمعاينة ولمزيد من التفاصيل لمعرفة شروط وأحكام البيع، يرجى التواصل مع المنظم شركة المخازن المتكاملة على المعلومات المذكورة أدناه

Site Visits Requirements	شروط زيارة الموقع للمعاينة
1. All bidders and visitors visiting the site must wear safety gears including safety shoes, safety helmets and safety clothing and adhere to safety instructions	1. يجب على جميع مقدمي العطاءات والزوار الذين يزورون الموقع ارتداء معدات السلامة بما في ذلك أحذية السلامة وخوذة السلامة وملابس السلامة والتقيد بتعليمات السلامة
2. Bidder shall schedule sufficient visits to ensure full knowledge of retired assets offered in each zone	2. يجب على جميع مقدمي العطاءات ترتيب عدد كاف من الزيارات لمعاينة الأصول المعروضة للبيع تحت كل بند بما ينفي الجهالة

Bidders shall submit two bids each in a sealed envelop	**يجب على مقدمي العطاءات تقديم عرضين كل منهما في مظروف مغلق :**
A. Commercial proposal	**A. العرض المالي**
1. An offer showing the purchase price of the zone utilizing the attached form “Tender Form”. (Award to highest price, provided his technical offer is accepted)	1. عرض مبين فيه سعر شراء المناطق مجتمعه حسب النموذج المرفق "استمارة تقديم العطاء". (الترسية لأعلى سعر، بشرط قبول العرض الفني)
2. The financial offer shall be accompanied by a certified cheque in the name of Saudi Yanbu Petrochemical Company (Yanpet) with the amount of five hundred thousand Saudi riyal (500,000 SAR) as a security deposit to enter the auction.	2. يجب أن يرفق مع العرض المالي مبلغ التامين بشيك مصدق باسم شركة ينبع السعودية للبتروكيماويات (ينبت) مقداره خمس مئة ألف ريال (500,000 ريال) كتأمين لدخول المزاد
3. Successful bidder shall submit a Site Evacuation guarantee amounting to 10% of the bid value, in a form of Bank Guarantee valid for 12 months at the time of signing the sale contract with the company	3. يجب على مقدم العطاء الفائز عند توقيع عقد البيع مع الشركة تقديم ضمان إخلاء الموقع وقدره 10٪ من قيمة العطاء، في شكل ضمان بنكي صالح لمدة 12 شهرا
4. The financial offer shall be accompanied by a certified cheque in the name of the auction organizer “Warehouse Integration Company” with the amount of 2.5% of the submitted bid value + VAT representing the auction commission.	4. يجب أن يرفق مع العرض المالي مبلغ عمولة المزاد بشيك مصدق باسم الشركة المنظمة للمزاد "شركة المخازن المتكاملة المحدودة" مقداره **2.5**% من قيمة العطاء **+** ضريبة القيمة المضافة
B. Technical Proposal	**B. العرض الفني**
Shall include the followings: 1. Demolishing capabilities: company profile, reference demolishing projects conducted, demolishing equipment, any applicable certification and credential in demolishing, construction, and safety…etc.	ويشمل على ما يلي: 1. القدرة الفنية في مجال إزالة الأصول والمعامل الصناعية: ارفاق مقدمة عن الشركة وأعمالها ومشاريعها المماثلة ونبذة عن المعدات والشهادات والرخص الخاصة بنطاق العمل.
2. As applicable, a table listing the alliances and/or subcontractors who are going to work with the bidder in the demolishing and transfer activities indicating the contractual relation with each.	2. حسب الحالة، جدول يبين الشركات الزميلة و/أو المقاولين بالباطن المتعاونين مع المشتري لإتمام أعمال الهدم والإزالة، مع إيضاح العلاقة التعاقدية مع كل منهم.
3. High level Demolishing Plan	3. خطة إزالة مبدئية .
4. Compliance table for all Scope of Work clauses.	4. جدول يوثق الالتزام بجميع بنود نطاق العمل.

5. Compliance table for all IR Demolishing EHSS Guideline latest revision clauses.	5. جدول يوثق الالتزام بجميع بنود أحدث نسخة من إرشادات السلامة والصحة والبيئة لمشروع الازالة.
6. Compliance table for the basic terms in this bid instruction.	6. جدول يوثق الالتزام بجميع الشروط الأساسية في متطلبات المشاركة في المزاد.

Payment & Cheques	**السداد والشيكات**
1. Interested bidders and those wishing to participate in the auction must pay the security deposits and agree to payment terms as below in order to enter the auction. Not fulfilling this requirement will result in removing the bidder from the auction.	1. يجب على مقدمي العطاءات والراغبين في المشاركة في المزاد دفع مبالغ التأمين والالتزام بباقي شروط المدفوعات كما هو مبين أدناه وهذا شرط أساسي لدخول المشتري للمزاد. عدم الالتزام بالشروط المذكورة لن يمكن المشتري من الدخول للمزاد.
2. Bidders shall issue a certified cheque in the name of Saudi Yanbu Petrochemical Company (Yanpet) as a security deposit amounting to five hundred thousand Saudi riyal (500,000 SAR) as a security to enter the auction, provided that it is returned to all bidders after concluding the auction. (Attached to the Commercial Proposal)	2. على مقدمي العطاءات إصدار شيك مصدق بمبلغ التامين خمس مئة ألف ريال (500,000 ريال) باسم شركة ينبع السعودية للبتروكيماويات (ينبت) كتأمين لدخول المزاد على أن يعاد بعد انتهاء المزاد لجميع المتقدمين. (يرفق مع العرض المالي)
3. Successful bidder shall submit Site Evacuation guarantee (10% of the bid value), in a form of Bank Guarantee valid for 12 months at the time of signing the sale contract with the company. The Bank Guarantee is refundable upon successful completion of demolishing and site evacuation.	3. يجب على مقدم العطاء الفائز تقديم ضمان إخلاء الموقع (10٪ من قيمة العطاء)، في شكل ضمان بنكي صالح لمدة 12 شهرا وذلك عند توقيع عقد البيع مع الشركة على أن يعاد بعد إتمام عمليات الاخلاء بشكل مرضي للشركة
4. Successful Bidder shall pay the full amount of the bid + VAT within 5 days of issuing the invoice, by a bank transfer or a certified cheque in the name of Saudi Yanbu Petrochemical Company (Yanpet). Contract of Sale with the Company will be signed upon payment	4. يجب على مقدم العطاء الفائز سداد كامل مبلغ العطاء + ضريبة القيمة المضافة خلال 5 أيام من اصدار الفاتورة بتحويل بنكي أو شيك مصدق باسم شركة ينبع السعودية للبتروكيماويات (ينبت)، ويتم توقيع عقد البيع مع الشركة عند ذلك
5. Bidders shall issue a certified cheque in the name of the auction organizer “Warehouse Integration Company” with the amount of 2.5% of the submitted bid value + VAT representing the auction commission. Provided that it is returned if the offer is not awarded. (Attached to the Commercial Proposal	5. على مقدمي العطاءات إصدار شيك مصدق بمبلغ عمولة المزاد مقداره **2.5%** من قيمة العطاء + ضريبة القيمة المضافة باسم الشركة المنظمة للمزاد "شركة المخازن المتكاملة المحدودة" على أن يعاد في حالة عدم إرساء العرض. (يرفق مع العرض المالي)

Basic Terms	شروط أساسية
1. **Bidder does not complete the remaining payments after notification of winning** :In the event that the Bidder does not complete the full purchase payment in line with clause **4** of Payment & Cheques section above, then his holding deposit mentioned in clause 2 above shall not refundable.	.1 **عدم استكمال مقدم العطاء الدفعات المتبقية بعد إخطاره بالفوز:** في حالة عدم إكمال مقدم العطاء سداد كامل دفعة الشراء بما يتماشى مع البند 4 من قسم الدفع والشيكات أعلاه، فإن شيك التامين المذكور في البند 2 من قسم الدفع والشيكات أعلاه لن يسترد له.
2. **Agreement to enter in a Contract of Sale with Yanpet:** Prior to a winning bid being accepted by **Yanpet**, the Bidder shall enter into a contract with Yanpet to perform the Demolishing. The Contract of Sale shall include the demolishing terms and conditions, this Bid Instruction, Scope of Work, and Yanpet Demolishing EHSS Guideline.	.2 **الاتفاق على إبرام عقد بيع مع ينبت:** قبل قبول **ينبت** للعطاء الفائز، يجب على مقدم العطاء توقيع عقد مع **ينبت** لتنفيذ عملية الهدم والازالة والنقل. و سيتضمن عقد البيع الشروط والأحكام المتعلقة بالهدم والإزالة و كما سيتضمن على وجه الخصوص متطلبات المشاركة في المزاد، ونطاق العمل، ودليل شركة **ينبت** للبيئة والصحة والسلامة والأمن الخاص بعمليات الهدم و الازالة و النقل.
3. Assets Utilization: a. All Assets under the Auction are sold as scrap. Re-use of Assets is a sole responsibility of the winning Bidder. SABIC/ **Yanpet**, their licensors and Assets' manufacturers shall not be liable for any damages resulted from re-use of the sold Asset by the winning Bidder or others. b. All Assets under the Auction are sold on an "As is," "Where is," "With all faults" basis and without any representation or warranty of any kind by SABIC/ **Yanpet**.	**.3 استخدام الأصول** : **.a** تباع جميع الأصول قيد المزاد كخردة .تقع مسؤولية إعادة استخدام الأصول على عاتق مقدم العطاء الفائز . لن تكون سابك/ **ينبت** ومرخصوها ومصنعو الأصول مسؤولين عن أي أضرار ناتجة عن إعادة استخدام الأصل من قبل مقدم العطاء الفائز أو غيره . **.b** تباع جميع الأصول على أساس" كما هي" و "أين هي "و" مع جميع العيوب "ودون أي مسئولية أو ضمان من أي نوع من قبل سابك / **ينبت.**
4. **Winning Bidder does not complete the Site Evacuation:** In the event that the Bidder does not complete the Demolishing of his purchased Assets and Site Evacuation as per agreed duration from the award date or in the event of major delay in which Bidder cannot meet the approved Demolishing and Site Evacuation plan, then Company has the right, after officially notifying the failed bidder, to stop the bidder and resell the Assets and demolish them through a new bidder or a 3rd party.	.4 **عدم إكمال مقدم العطاء الفائز إخلاء الموقع:** في حالة عدم إكمال مقدم العطاء لهدم أصوله المشتراة وإخلاء الموقع في غضون المدة المتفق عليها من تاريخ الترسية أو في حالة حدوث تأخير كبير لا يستطيع فيه مقدم العطاء تلبية خطة الهدم وإخلاء الموقع المعتمدة، يحق للشركة، بعد إخطار مقدم العطاء المتعثر رسميا، إيقاف مقدم العطاء وإعادة بيع الأصول الموجودة وهدمها من خلال مقدم عطاء جديد أو طرف ثالث
5. **Bidder does not comply with EHSS requirements set out in the endorsed EHSS Plan:** In the event that the bidder failed to comply with the endorsed EHSS plan, he will be officially notified and given the chance to correct. Third time failure event will be treated as clause 4 above.	.5 **عدم امتثال مقدم العطاء لمتطلبات البيئة والصحة والسلامة والأمن المنصوص عليها في خطة البيئة والصحة والسلامة والأمن المعتمدة:** في حالة فشل مقدم العطاء في الامتثال لخطة البيئة والصحة والسلامة والأمن المعتمدة، سيتم إخطاره رسميا ومنحه الفرصة للتصحيح. و في حال تكرر الفشل للمرة الثالثة فانه سيتم التعامل معه كما في البند 4 أعلاه

Attachments	المرفقات
1. Scope of Work :	1. نطاق العمل
2. **Yanpet** Demolishing EHSS Guideline	2. دليل شركة ينبت للبيئة والصحة والسلامة والأمن الخاص بعمليات الهدم والازالة والنقل
3. Environmental Management and Monitoring Plan for **Yanpet** (EMMP)	3. خطة الإدارة والمراقبة البيئية لينبت (**EMMP**)

Tender Form	استمارة تقديم العطاء
Messrs. / Saudi Yanbu Petrochemical Company (Yanpet) Greetings, After thorough review and inspection of the retired assets which has been offered for auction, I offer you the following price, excluding tax and auction commission	السادة/ شركة ينبع السعودية للبتروكيماويات (ينبت) تحية طيبة، بعد المعاينة والاطلاع على الأصول / المعامل التي تم عرضها للبيع بالمزاد حسب البيانات المذكورة فإنني أتقدم لكم بالسعر التالي غير شامل الضريبة وعمولة المزاد.

Areas Number: Area (1): Unit 50 and 64 Area (2): 3 Ethylene glycol columns C1, C2, C3 Area (3): 2 Ethylene glycol columns C4\C5 Area (4): Laydown yard (Mixed Metal)	**رقم المنطقة:** منطقة (1): وحدة 50 و 64 منطقة (2): 3 أعمدة الإيثيلين جلايكول C1,C2,C3 منطقة (3): 2 عمود الإيثيلين جلايكول C4\C5 منطقة (4): ساحة تخزين (معادن مختلطة)

Insurance Cheque	☐	☐	شيك التامين
Auction Commission Cheque	☐	☐	شيك عمولة المزاد
Price in number			السعر رقما:
Price in writing			السعر كتابة

Confession	إقرار
I acknowledge that I have fulfilled all the conditions in the Bid Instruction document and its attachments and have completed the payment of the specified security deposit, and the auction commission amount in form of certified cheques. I have inspected the assets referred to above prior to purchasing them and have purchased them in their current condition. I acknowledged that the auctioneer and Yanpet are relieved from any liability regarding the assets condition. I am aware and committed to pay the VAT 15% payment once I win the bid.	أقر بأني استوفيت كافة الشروط المذكورة في وثيقة متطلبات المشاركة في المزاد ومرفقاتها واتممت دفع مبلغ التامين المحدد ومبلغ عمولة المزاد بتسليم شيكات مصدقة بالمبالغ. وأنى قد قمت بمعاينة المواد المشار إلى بياناتها أعلاه قبل شرائها وقد اشتريتها بعد المعاينة بحالتها الراهنة، وأقر بخلو مسؤولية منظم المزاد وشركة ينبت. وأنا على علم وملتزم بدفع ضريبة القيمة المضافة ١٥ ٪ في حال فوزي بالمزايدة

Name			الاسم:
Signature			التوقيع:
Mobile			الجوال:
ID # or Commercial Registration CR #			رقم السجل التجاري / الهوية:
Stamp			الختم:

~ End of Document ~

Attachments

(1)

نطاق العمل
Scope of Work

Classification: Internal Use

SCOPE OF WORK

U-50/64

Demolishing Work

TABLE OF CONTENT

1. ABBREVIATION, DEFINITION, AND INTERPRETATION

AG/UG	Above ground / Underground.
Contractor	The winning/awarded buyer of a particular retired assets.
Demolition Plan	A document that explains the correct procedures, safety precautions and work requirements of a project.
EHSS	Environment, Health, Safety & Security.
EMMP	Environment Management & Monitoring Plan.
EMS	Environment Management System.
Free Land	The area free from all the UG/AG materials that have been removed.
HCIS	High Commission Industrial Security.
ISO	International organization for Standardization.
OH&S	Occupational, Health & Safety.
Principal Contractor	It refers to the contractor appointed by YANPET to organize, conduct the auction, and manage Contractor demolishing activities.
QMS	Quality Management System.
RCER	Royal Commission Environment Regulations.
SAF	Safety and Fire Directives.
SEC	Security Directives.
Work Permit	A written document authorizing a person or a group to perform work.
OMS	OPERATIONS MANAGEMENT SYSTEM

2. INTRODUCTION

YANPET intends to demolish their retired assets to make it free land. Retired assets are segregated into 4 areas; Area (1): Unit 50 and Unit 64 (as shown in Figure 01), Area (2): 3 Columns C1,C2,C3, Area (3): 2 Column C4,C5 Area (4): Laydown yard (Mixed Metal), as shown in Figure 02. The scope of work includes, as minimum, demolition, removal, and transportation of the retired assets outside YANPET site. The objective of Scope of Work is to ensure that activities are performed in accordance with the guidelines and standards set forth or referred therein, resulting in timely completion of retried assets demolition.

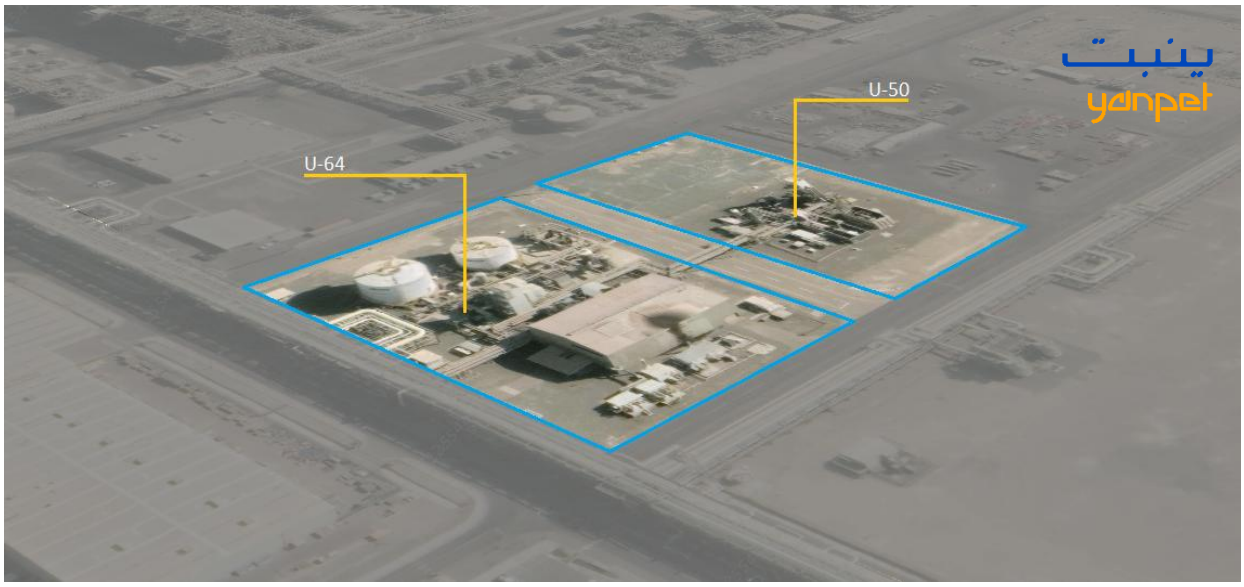


FIGURE 01

3. PURPOSE

The objective of the Scope of Work is to ensure that activities are performed according to demolition plan with elimination of all hazards. All activities shall be evaluated to ensure conformity with legal obligations and YANPET requirements.

4. GENERAL EHSS REQUIREMENT

4.1 Contractor shall use YANPET Work Permit system, approved by YANPET and in line with the YANPET Demolishing EHSS/Asset Retirement Guidelines (attachment 01) to perform their job safely.

4.2 Contractor is responsible for all EHSS requirements for their staff and any subcontractor staff.

4.3 Detailed EHSS requirements are elaborated in YANPET Demolishing EHSS Guideline and to be fully met.

4.4 Emergency Evacuation to comply with YANPET EHSS Guidelines.

4.5 Comply to YANPET all EHSS Plan requirements.

4.6 Contractor must ensure Safety officer to site crew minimum ratio 1:15

4.7 Contractor must ensure to take all required precautions and arrangement to avoid any damage nearby Yanpet asset / infrastructure.

4.8 Critical lifting must be monitored by approved rigger I (YANPET interview required), complying with approved rigging plan, and lifting certificates.

4.9 Contractor must ensure well barricading and covering to minimize debris /free float dust in surrounding area. Also, to ensure such debris /material does not block the drain channels.

4.10 For underground assets (piping, Power/control cables, grounding mesh, etc.), Contractor must ensure to verify for any live electrical/piping network before starting excavation.

5. SCOPE OF WORK

5.1 **The project scope of work will cover the following:**

5.1.1 Area (1): Unit 50 and Unit 64

5.1.2 Area (2): 3 Ethylene glycol columns C1,C2,C3

5.1.3 Area (3): 1 Ethylene glycol columns C4,C5

5.1.4 Area (4): Laydown yard (Mixed Metal)

5.1.5 Any additional mixed metal.

5.2 Items 5.1.2 & 5.1.3 will be subject to owner approval.

5.3 The PROJECT will be managed by YANPET and will be executed through LSTK CONTRACTOR

5.4 Contractor shall develop Demolition Plan approved by YANPET which shall include their EHSS plan, Organization, Work Permit system, execution schedule, sequence of material transportation, and demolishing method. The Demolishing Plan shall be submitted after Contractor selection.

5.5 Contractor to submit detailed Bar chart in line with proposed demolish plan for approved scope of work .

5.6 Method statement must define step-by-step plan on how the demolition Contractor intends to safely demolish buildings, structures, process units or other facilities. It should be developed following careful planning of each stage of the demolition, from mobilization to demobilization.

5.7 Contractor shall erect a barricade for their allocated zone area and control the zone access accordingly.

5.8 Contractor shall consider brown field strategy providing resources such as permit receivers, safety officers, fire watch. YANPET will be responsible in permit issuing and presence of safety officers and supervisors jointly with the contractor crew.

5.9 YANPET shall ensure electrical and mechanical isolation of assets prior to commencement of the demolishing activities.

5.10 YANPET shall ensure assets are free of hazardous material prior to commencement of demolishing activities.

5.11 The demolition work would involve the removal of all aboveground and underground equipment foundation and facilities.

5.12 Contractor to consider shifting of identified asset to allocated area as advised by Yanpet

5.13 Contractor shall ensure all assets and tools used to carry out the scope have a valid inspection and testing certification by third party/Yanpet.

5.14 Contractor shall transport all the retired assets from the allocated zone to outside YANPET site.

5.15 Contractor shall carry demolishing scope by specialized manpower (or outsource qualified subcontractor) based on the assets type (electrical, mechanical, civil …, etc)

5.16 Contractor shall arrange all facilities required for their team in the zone to carry out the scope under this contract not limited to the followings:

5.16.1 Offices portable cabins.

5.16.2 Telecommunication.

5.16.3 Toilets.

5.16.4 Transportation and others.

5.17 Contractor shall arrange all required utilities not limited to the followings:

5.17.1 Electrical Power.

5.17.2 Water.

5.17.3 Sanitary.

5.17.4 Compressed Air.

5.18 The WORK shall be performed strictly in full compliance with the Yanpet safety and security regulations and Yanpet work standards and procedures even if not mentioned in this document. Check general EHSS requirements.

5.19 Yanpet will provide available drawings and documentation

6. GENERAL REQUIREMENTS FOR BIDDERS/AWARDED CONTRACTOR

6.1 CONTRACTOR shall accordingly provide a Team headed by a well-qualified Project Manager, together with dedicated well experienced, specialists and task force members covering all aspects of the services to ensure fulfillment of CONTRACTORS obligations under the purchase order.

6.2 The following key positions are required (as applicable) and shall be shown in Project Organization Chart with lines of authority name and titles. Any deviation or part time assignment only must be cleared with Yanpet prior to CONTRACT or approved during the execution:

6.2.1 Project Manager

6.2.2 Disciplines Engineer (process, mechanical, civil, rotating, … etc.) who ever applicable to cover the scope.

6.2.3 planner

All above-listed key positions shall be from CONTRACTOR's home office permanent staff, who shall be involved with the development of the project.

All the key positions shall be assigned with the prior approval (and interview) of Yanpet's representative. CONTRACTOR shall undertake to comply with all the requirements specified in the SOW regarding project.

Yanpet shall have the right to direct the CONTRACTOR to remove and replace key personnel whose performance is found, in the sole view of Yanpet, inadequate in relation to the need of this project.

6.3 Bidders shall submit Technical & Commercial Proposals separately. Bidders are cautioned not to include any commercial information in their Technical Proposal

6.4 Before submitting the Bid, the Bidder shall thoroughly familiarize itself with all the laws, including but not limited to Saudi Labor Laws and Ministry of Interior, applicable to the work or services to be performed, and the Saudi Arabian Ministry of Economy and Commerce requirements regarding commercial registration of companies prior to commencing any work or service activity in Saudi Arabia. By submitting the Bid, the Bidder is deemed to have made the necessary allowances in the Bid Price for compliance with all laws, rules, regulations and procedures applicable in the Saudi Arabia or those applicable in any other country where any portion of the work or services will be performed.

6.5 Bidder acknowledges that the Customs Regulations of Saudi Arabia will apply to the importation of equipment and other materials and that such regulations prohibit the importation of certain products and components which Bidder shall be aware of.

6.6 If the Bidder discovers any discrepancy or inconsistency between this CONTRACT and any law, ordinance, statute, rules, regulation, order or decree, Bidder shall report the same immediately, in writing to SABIC who will issue such further instructions as may be necessary.

6.7 CONTRACTOR shall as far as reasonable and technically, qualitatively and economically justified, make maximum use of Local Labors, give proper consideration wherever possible to Local Suppliers, Manufacturers and Contractors.

6.8 During execution of the work, the Bidder will be expected to give special attention to the matter of business ethics. It will be required to maintain appropriate business standards/procedures/controls with the objective of avoiding any adverse impact on the interest of SABIC and Affiliate. Necessary Non-Disclosure Agreement/s shall be signed in line with SABIC procedures and guidelines.

6.9 The Bidder should inspect the worksite and surrounding locations and must satisfy itself as to the nature of the work or services, the correctness and sufficiency of the rates and prices submitted and general local conditions, especially ground, climatic, sea, other water and weather conditions, which could affect the work or services.

6.10 The Bidder shall perform the site visit and bid clarification meeting in order to become familiar with the physical and other conditions pertaining to the work or services to be performed. It is strongly recommended that the Bidder attend any scheduled site visit and clarification meeting.

6.11 Bidder shall provide the names of its representatives. Attendees of the site visit shall have all necessary protective/safety clothing and PPEs.

6.12 The Bidder may designate his representatives to attend the Pre-Bid Meeting and/or Site Visit on its behalf and at its own cost. Attendance by representatives of Bidder's Principal/Sub-Contractors shall be permitted only in those cases where the Bidder has

informed SABIC in writing, prior to the site visit/clarification meeting date, the names of the companies whom it intends to nominate as its Principal/ Sub-Contractors.

6.13 All queries must be raised by the Bidder and not by local agents/sponsors. Any queries related to Bid Documents or submitting the Bid must not be raised by telephone or personal contact, but must be submitted in writing to Yanpet's Project Manager/Leader.

6.14 As per YANPET STANDARD. CONTRACTOR shall submit its Quality Assurance/Quality Control procedure for review and approval. QA/QC shall include site acceptance test as well as type tests results

7. AREA OVERVIEW

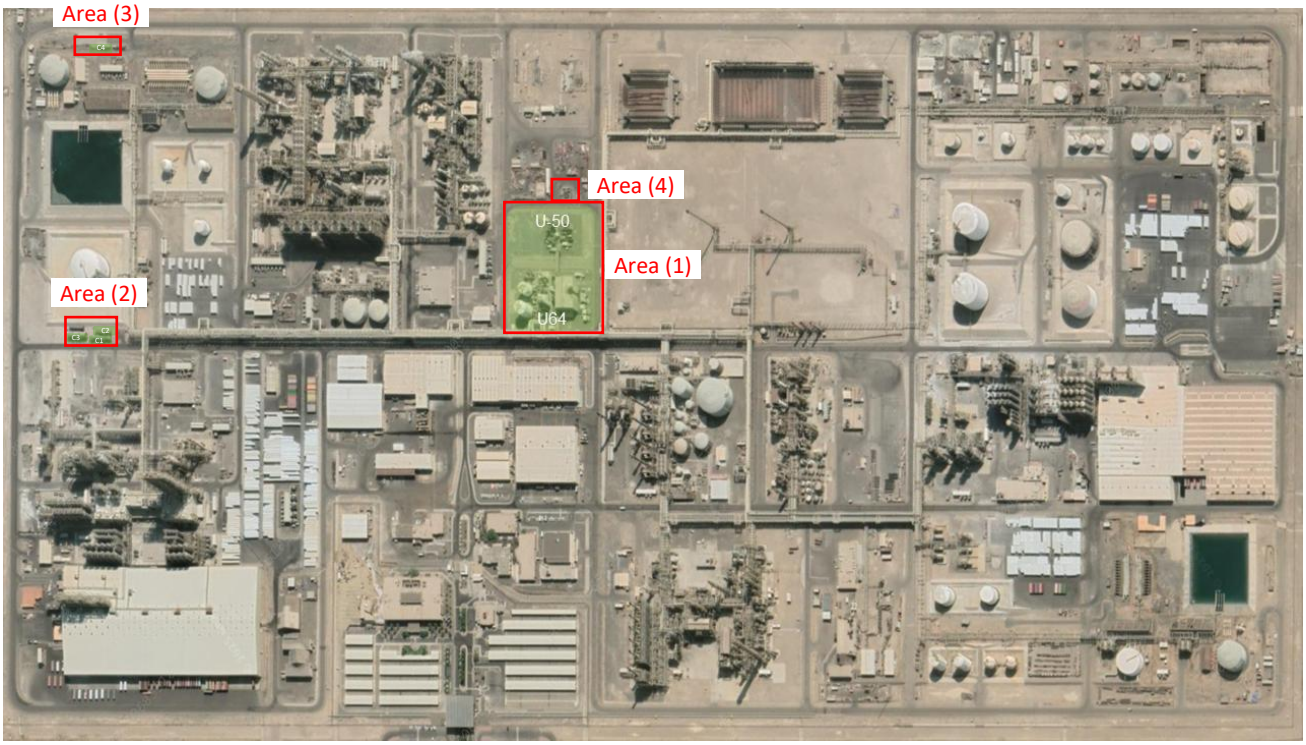


FIGURE 02

8. STANDARDS/GUIDELINES

Followings are the applicable guidelines for Contractors:

8.1 ISO 9001:2015 QMS.

8.2 ISO 45001:2018 OH&S.

8.3 ISO 14001:2015 EMS.

8.4 RCER 2015.

8.5 HCIS (SAF, SEC).

9. WASTE DISPOSAL REQUIREMENTS

9.1 Contractor shall remove, segregate, transport, and dispose of the available and generated waste (Insulation, debris, oil, etc ..) from the demolition activity in accordance to RCER.

9.2 Contractor shall be responsible for the removal of any trapped or residual chemical waste.

10. CONTRACTOR SITE OFFICES AND LOGISTICS

10.1 Contractor shall provide their own zone Site Office Layout and Traffic Management Plan approved by YANPET complying to OMS requirements.

11. HOUSEKEEPING

11.1 The Contractor shall be responsible for maintaining a good standard of housekeeping and cleanliness at the worksite and their temporary facilities.

11.2 Planned maintenance and proper segregation of all tools and equipment's shall be maintained all the times in the project site.

11.3 Access and egress shall be maintained to prevent slips, trips and falls in the project site.

11.4 Housekeeping shall also include the ultimate disposal of generated waste on a regular basis in accordance with YANPET Demolishing EHSS Guidelines.

11.5 Disposal of any unauthorized, uninformed, or unapproved waste within the premises including drain channels, trenches… etc. is strictly prohibited.

11.6 Housekeeping shall be done all the time: before, during and after the job in the workplace.

11.7 Proper allocation of separate waste bins for different types of waste in the zone.

12. PROJECT TIMELINE

12.1 Contractor should demolish and remove all retired assets within 2 to 3 months based on an approved demolition plan.

13. SPECIAL REQUIREMENT

13.1 All assets are sold as scrap (AS-IS WHERE IS). Reuse of assets is the sole responsibility of Contractor. SABIC / YANPET / Principal Contractor, their licensors, and assets manufacturers shall not be liable for any damages resulting from reuse of sold assets by Contractor or others.

13.2 Assets neither for sale nor disposal are marked with (NOT FOR SALE) in the field and shall be excluded from the demolishing activities.

14. ACCEPTANCE CRITERIA

Acceptance of work shall be issued to Contractor if they meet, as a minimum, the following criteria.

14.1 Removal of all aboveground/underground (equipment foundation) retired assets in the zone.
14.2 levelling the area.
14.3 Completing the job within the approved demolishing plan time frame.
14.4 Completing all regulatory requirements & standards.
14.5 Removal of all Contractor's facilities and unit temporary fence.
14.6 Handover the area as free land to YANPET.

15. WORKING HOURS

15.1 Working hours shall be 6 Days x 10 Hours in accordance with YANPET Working schedule.

16. AREA SPECIFIC DEMOLISHING GUIDELINES

16.1 A separate method statement for high elevation above 30m assets and structure demolishing shall be submitted and approved by both Contractor and YANPET.

17. VEHICLES AND TRAFIC RULES

17.1 Vehicle entry inside the plant is subjected to authorized entry permits and stickers.
17.2 Only authorized and qualified drivers / operators shall operate the vehicles.
17.3 Seat belts must be worn by drivers and passengers.
17.4 All traffic signs must be obeyed.
17.5 Park your vehicles only at designated places.
17.6 Upon hearing the emergency alarm, park your vehicle at right side of the road, switch off the engine, report to nearest building, listen and follow the emergency announcement.
17.7 Don't leave the vehicle running un-attended.
17.8 Entry into any prohibited area, is subjected to a valid vehicle entry permit.
17.9 The speed limit within Yanpet premises is 30 km/hr.
17.10 Vehicle entry into hazardous zones of plants is strictly prohibited unless entry permit is obtained.
17.11 Vehicle parking within five meters of firefighting equipment is prohibited.
17.12 Unauthorized repairing / refueling of any vehicle within YANPET premises is not allowed.

17.13 Ascending or descending from running vehicle is prohibited.

18. PROJECT MANAGEMENT

18.1 APPLICATION OF LIQUIDATED DAMAGES (LD)

18.1.1 The CONTRACTOR shall be liable to pay liquidated damages in accordance with the provisions of this Section 8.4 subject to any specific terms (including, but not limited to, any cap on liability).

18.1.2 If the CONTRACTOR fails to complete any deliverable/phase referred to below by the date agreed between SABIC / YANPET and the CONTRACTOR during the project kick-off meeting or thereafter then the CONTRACTOR shall be liable to pay SABIC / YANPET liquidated damages at the rate set out below (subject to the relevant maximum amount) until completion of the deliverable/phase is deemed to have taken place.

18.1.3 Contractor shall utilize latest scheduling software (e.g., MS Project, Primavera Project Planner P6, or any other SABIC approved software) for project scheduling. Contractor is liable to provide native files of all such schedules and reports.

18.1.4 Contractor shall prepare and submit for review and approval by SABIC a comprehensive planning package including at least below documents:

18.1.4.1 PROJECT PRELIMINARY SCHEDULE LEVEL-I (AT PROPOSAL STAGE):

18.1.4.2 PROJECT MILESTONE SCHEDULE LEVEL-II (AFTER AWARD OF CONTRACT): This is a summary time schedule (bar chart) covering the scope of work, including all project completion milestone dates and other key dates in compliance to project timeline provided by SABIC.

18.1.4.3 PROJECT DETAILED SCHEDULE This is a detailed time schedule (bar chart) covering the scope of work aggregated into work packages or Work Breakdown Structure (WBS), further detailed to measurable work activities and shall be submitted during project KOM.

Annexure: Tender Bidding Form

Tender Form	استمارة تقديم العطاء
Messrs. / Saudi Yanbu Petrochemical Company (Yanpet) Greetings, After thorough review and inspection of the retired assets which has been offered for auction, I offer you the following price, excluding tax and auction commission	السادة/ شركة ينبع السعودية للبتروكيماويات (ينبت) تحية طيبة، بعد المعاينة والاطلاع على الأصول / المعامل التي تم عرضها للبيع بالمزاد حسب البيانات المذكورة فإنني أتقدم لكم بالسعر التالي غير شامل الضريبة وعمولة المزاد.

Areas Number: Area (1): Unit 50 and 64 Area (2): 3 Ethylene glycol columns C1, C2, C3 Area (3): 2 Ethylene glycol columns C4\C5 Area (4): Laydown yard (Mixed Metal)	**رقم المنطقة:** منطقة (1): وحدة 50 و 64 منطقة (2): 3 أعمدة الإيثيلين جلايكول C1,C2,C3 منطقة (3): 2 عمود الإيثيلين جلايكول C4\C5 منطقة (4): ساحة تخزين (معادن مختلطة)

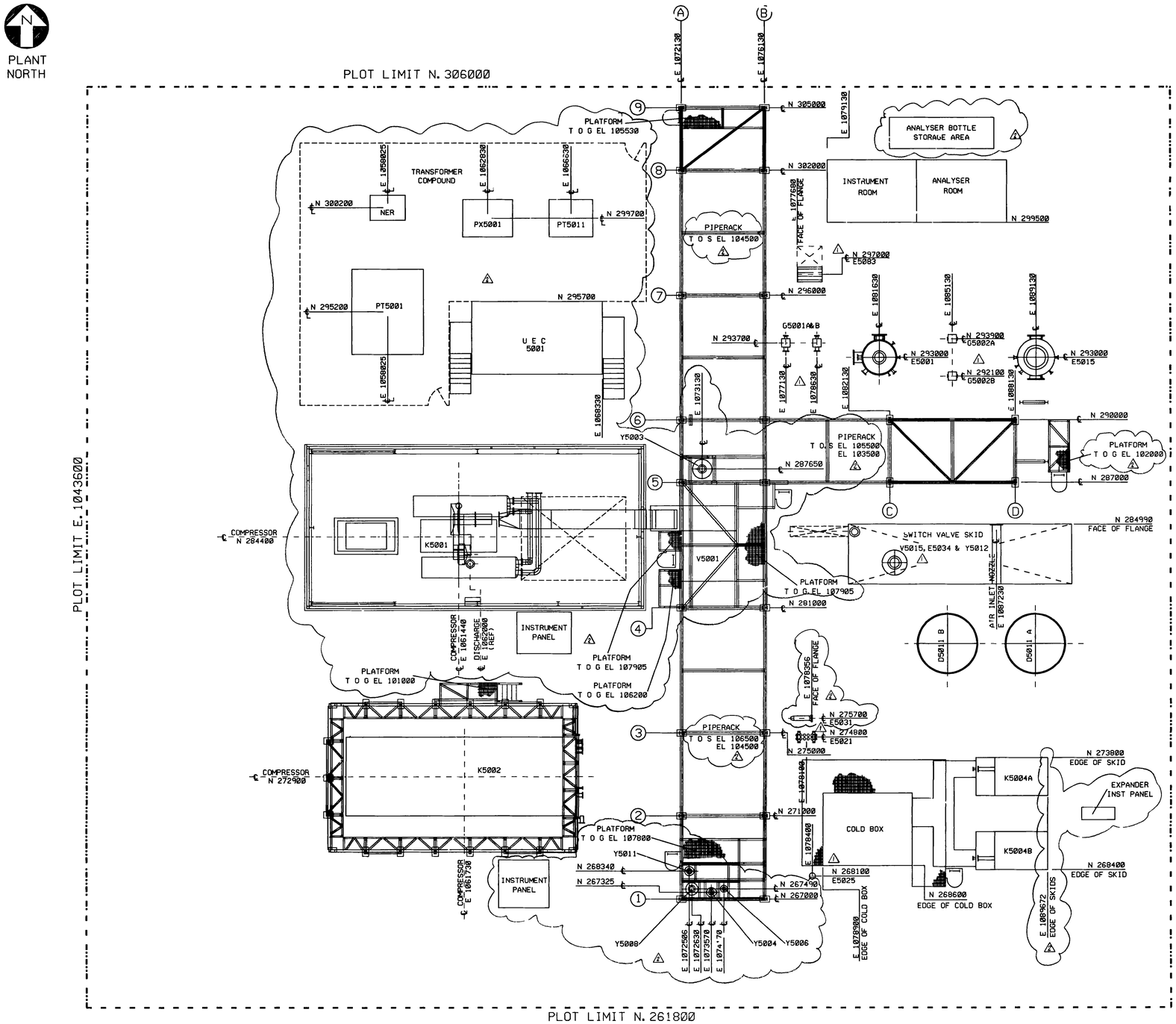
Insurance Cheque	☐	☐	شيك التامين
Auction Commission Cheque	☐	☐	شيك عمولة المزاد
Price in number			السعر رقما:
Price in writing			السعر كتابة

Confession	إقرار
I acknowledge that I have fulfilled all the conditions in the Bid Instruction document and its attachments and have completed the payment of the specified security deposit, and the auction commission amount in form of certified cheques. I have inspected the assets referred to above prior to purchasing them and have purchased them in their current condition. I acknowledged that the auctioneer and Yanpet are relieved from any liability regarding the assets condition. I am aware and committed to pay the VAT 15% payment once I win the bid.	أقر بأني استوفيت كافة الشروط المذكورة في وثيقة متطلبات المشاركة في المزاد ومرفقاتها واتممت دفع مبلغ التامين المحدد ومبلغ عمولة المزاد بتسليم شيكات مصدقة بالمبالغ. وأني قد قمت بمعاينة المواد المشار إلى بياناتها أعلاه قبل شرائها وقد اشتريتها بعد المعاينة بحالتها الراهنة، وأقر بخلو مسؤولية منظم المزاد وشركة ينبت. وأنا على علم وملتزم بدفع ضريبة القيمة المضافة ١٥ ٪ في حال فوزي بالمزايدة

Name			الاسم:
Signature			التوقيع:
Mobile			الجوال:
ID # or Commercial Registration CR #			رقم السجل التجاري / الهوية:
Stamp			الختم:

~ End of Document ~

M9555-12A



0 1.5 3 4.5 6 7.5
DIMENSIONS IN METRES

EQUIPMENT LIST

APL ITEM NO	YANPET ITEM NO	DESCRIPTION	ELEVATION
		COLD BOX	U/S B/PL EL 100000
C11A/B	D5011A/B	MOL SIEVE ADSBRS	U/S B/PL EL 100000
C115	V5015		
E134	E5034	MOL SIEVE SKID	U/S B/PL EL 100000
V112	Y5012		
C112	E5001	D C A C	U/S B/PL EL 100000
E121	E5021	PURGE VAP	U/S B/PL EL 100000
E125	E5025	DISPOSAL VAP	CL STM IN EL 100500
E131	E5031	GRD ADSBR REACT HTR	CL EL 100450
E134	E5034	MOL SIEVE REACT HTR	MOL SIEVE SKID
E183	E5083	CLSD CIR CW EXCH	U/S B/PL EL 100100
G121A/B	G5001A/B	D C A C PUMPS	U/S B/PL EL 100162
G122A/B	G5002A/B	CHILLED WATER PUMPS	U/S B/PL EL 100233
K101	K5001	MAIN AIR COMP	U/S B/PL EL 100000
K102	K5002	OXYGEN COMP	U/S B/PL EL 100075
	K5003	M.A.C INLT FLTR EXT FAN	ON V5001 INLT FLTR
K104A/B	K5004A/B	EXPANSION TURBINES	U/S B/PL EL 100000
V101	V5001	INLT AIR FLTR/SILENCER	U/S B/PL EL 107875
V103	Y5003	AIR COMP VENT SILENCRE	FOF EL 108000
V104	Y5004	OXYGEN VENT SILENCER	FOF EL 111400
V106	Y5006	NITROGEN VENT SILENCER	FOF EL 111325
V108	Y5008	DEFROST SILENCER	FOF EL 110850
V111	Y5011	HP GOX VENT SILENCER	FOF EL 110950
V112	Y5012	MOL SIEVE DEP SILENCER	MOL SIEVE SKID
V115	E5015	WASTE NITROGEN TOWER	U/S B/PL EL 100000

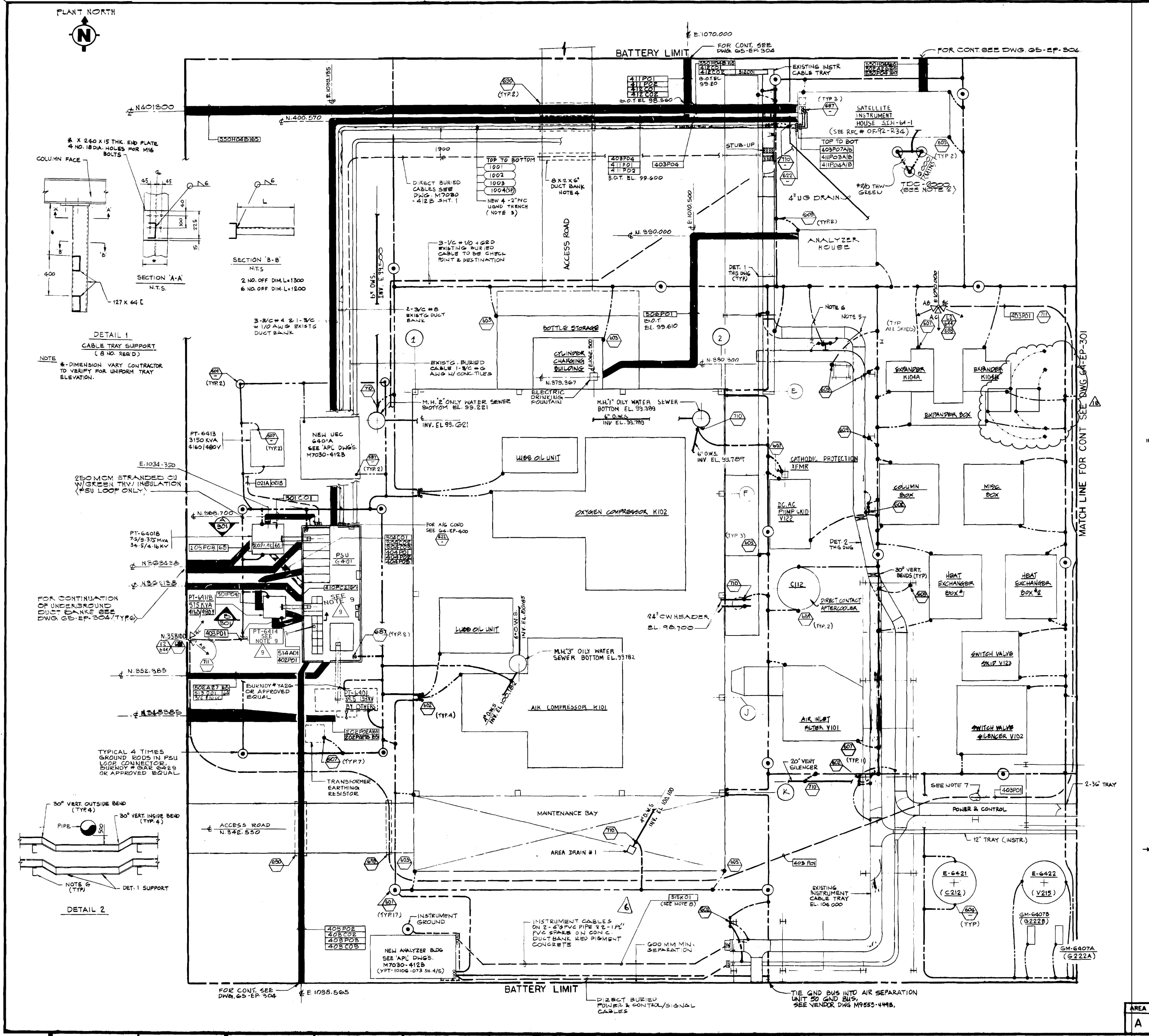
REV	ECN	REVISIONS	DATE	DRAWN	CHKD	APPD
2	17325	SEE ECN	APR 89	TDS	IRC	AUG
1	17211	SEE ECN	JAN 89	TDS	IRC	MJC
0	——	ORIGINAL ISSUE	1-12-89	TDS	IRC	WAH

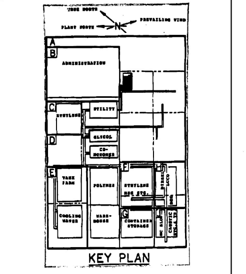
EQUIPMENT ARRANGEMENT
216MT/D GOX PLANT UNIT 50
YANPET SAUDI ARABIA

PRODUCTS

DRAWN: TDS DATE: 1-12-89
CHECKED: IRC SCALE: 1:75
APPROVED: W A HEASMAN

DRG NO. M9555-12A SHEET 1 OF 1
YPT DWG NO. 50-DA-102 REV. 2





NOTES

1. FOR STANDARD ELECTRICAL SYMBOLS SEE DWG 00-AP-502-2
2. SIH SPECIAL INSTRUMENT GROUND SHALL NOT EXCEED 1Ω RESISTANCE.
3. PVC CONDUIT TO BE INSTALLED 460mm MINIMUM UNDERGROUND & TO BE ENCLOSED WITH RED PIGMENTED CONCRETE.
4. WORK THIS DRAWING WITH 'APL' DRAWING NO. M7030-412B SHT. 1 THRU 5.
5. CONTRACTOR TO PROVIDE ADDITIONAL TRAY SUPPORT FIXED TO NEAREST COLUMN.
6. TYPICAL CABLE TRAY SUPPORT SEE DETAIL 'B' ON 'APL' DRAWING NO. M7030-803A, 20 EACH REQ'D.
7. SPLICE TO THE EXISTING & REMOVE THE FLOOD LIGHTING.
8. EXISTING INSTRUMENT CABLE TRAY SHALL BE USED IN ROUTING CABLE 515K01 GOING TO UNIT 60 CONTROL BUILDING. SEE DWG. NOS. 50-EP-401 & 50-EP-402 FOR CONTINUATION.
9. FOR UNDERGROUND & GROUNDING PLAN, SEE YEP DWG. NO. Ø64-DP-331 SHT. ØØ1.

9

REV	ISSUE DATE	DESCRIPTION	DSN.	CHKD.	PROC.	APE / DS	PEM		CLIENT APPL.	MICRO FILMED DATE
10	4JUL 2002	REVISED AS PER U-64 COLD BOX MODIFICATION PROJECT	TM	TAA						AAF
9	4JUN 2002	AS-BUILT FOR YEP INSTALLED EQUIPMENT.	JNC	TAA						AAF
8	25MAY 1992	REVISED TO AS-BUILT (90-070)	ESC							
7	25OCT 1991	ADDED UEC & ANALYZER GROUNDING ADDED NOTES & DET'LS. 90-070	JPA							
6	01JUNE 1991	ADDED TRAY, GND'G, PUMPS & TANKS MOLE SIEVES-90070	JPA	–	–					
5	6/2/89	ADDED GND'G AIR SEPARATION UNIT 50 PROJ #6105	ARB							

SAUDI YANBU PETROCHEMICAL COMPANY
MAXIMUM CAPACITY EXPANSION
UNIT 50 - AIR SEPARATION

COMBUSTION ENGINEERING — LUMMUS CREST INC. HOUSTON DIVISION

LEGEND

(602) ENGINEERING STANDARDS DETAIL CALLOUT. SEE INDICATED DRAWING (00-AP-602)

POLE MOUNTED FLOODLIGHT
L2 FIXTURE TYPE FROM FIXTURE SCHEDULE (00-AP-507)
644 INSTALLATION DETAIL DRAWING NUMBER
A,B FEEDER PHASE (480V.) LTG. PNL. & CKT. NO. (120V)
◄ AIMING DIRECTION
688 OFF-SITE POLE LIGHTING STUB-UP DETAIL

REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION
65-EP-304	UNDERGROUND RACEWAY & GROUNDING PLAN AREA 4
64-EP-301	UNDERGROUND, GROUNDING LIGHTING PLAN SHEET #2
64-ES-100	UNIT 64, UNDERGROUND PIPING PLAN
60-EP-200	AREA CLASSIFICATION & KEY PLAN
64-DP-101,102	ELECT. SINGLE LINE DIAGRAM.
00-AP-601 THRU 685	ELECTRICAL STANDARD INSTALLATION DETAILS
50-EP-401	ELECT. PLAN, LIGHTING & CABLE TRAY
50-EP-402	ELECT. PLAN, LIGHTING. CABLE TRAY & CONDUIT
Ø64-DP-331 SHT. ØØ1.	ELECTRICAL DETAILS PSU-64Ø1

9

BECHTEL PETROLEUM, INC.

No	DATE	REVISIONS	BY	CH'K	DESIGN SUPV	ENG'R	PROJ ENGR	APPR
5	28FEB 1995	ADDED CONDUIT ROUTING PER AFE # 95-002	ADA					
4	08NOV '86	REVISED TO INCORPORATE PROJECT NO. 84-058	FTS					
3	03FEB 1985	REVISED TO AS BUILT	JSM					
6	9JUN 1996	REV'D AS-BUILT FOR 95-002 TO REROUTE CABLE AS SHOWN	GREG					
1	6/23/82	ISSUED FOR CONSTRUCTION						

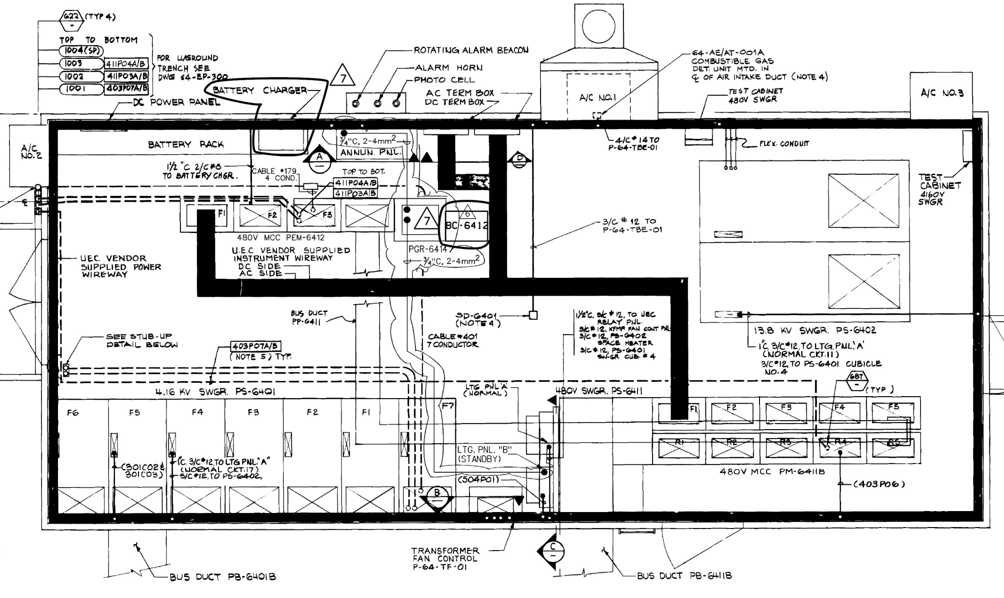
SCALE 1—100 | DESIGNED G WILLIAMS | DRAWN | CHIEF ENGR

BECHTEL
HOUSTON

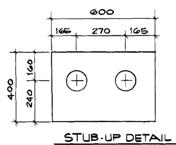
SAUDI YANBU
PETROCHEMICAL COMPANY

ELECTRICAL UNDERGROUND, GROUNDING AND LIGHTING PLAN SHEET 1
UNIT 64-AIR SEPARATION AREA

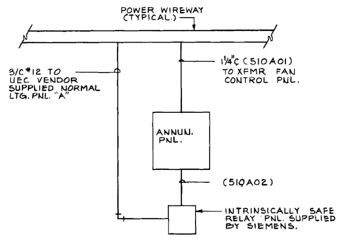
AREA	JOB No.	DRAWING No.	REV.
A	11211	64-EP-300	9



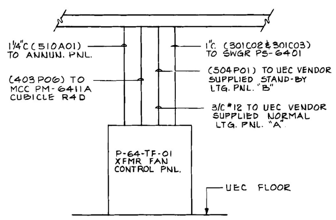
PLAN VIEW UEC PSU-6401
(CONDUIT ROUTING SHOWN DIAGRAMMATICALLY)
SCALE - 1:20



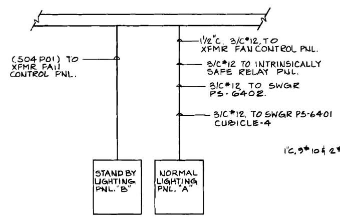
STUB-UP DETAIL
N.T.S.



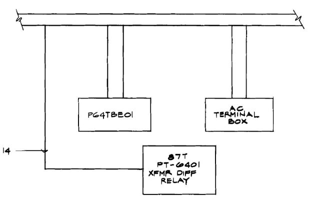
SECTION A
N.T.S



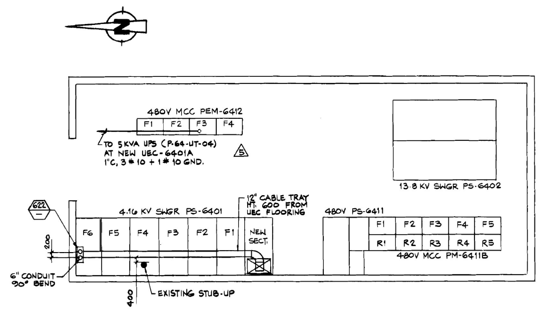
SECTION B
N.T.S



SECTION C
N.T.S



SECTION D
NTS



PARTIAL PLAN PSU-6401
(CABLE TRAY LAYOUT)
NTS

NOTES

1. ALL CONDUITS TO BE 3/4" RGS UNLESS OTHERWISE NOTED.
2. FOR CONDUIT WIRE FILL, REFER TO UNIT-64 CABLE SCHEDULE DWG. Nº 64-BP-770 UNLESS OTHERWISE NOTED. CABLE Nºs ARE SHOWN IN PARENTHESIS.
3. FOR INSTRUMENT WIREWAY WIRE FILL REFER TO VENDOR INTERCONN. DIAGRAM DWG. Nº 8295-421A (BY AIR PRODUCTS)
4. EQUIPMENT:- 64-AE/AT-001A & SD-6401 ARE SUPPLIED UNDER M/R 11211-083-P-151
5. CONDUIT TO BE ROUTED & SUPPORTED UNDERNEATH THE SUB-STATION

LEGEND

REFERENCE DRAWINGS

DRAWING NO	DESCRIPTION
64-BP-770	UNIT-64 CABLE SCHEDULE
64-EP-300	ELECT. U/G, GROUNDING & LIGHTING PLAN
V.P. 11211-064-A-001-AC 686	PLOT PLAN U/G. ELECT. CONDUIT ROUTING LAYOUT.
V.P. 11211-064-A-001-AC2196 & 2197	UEC INTERCONNECTION DIAGRAM.
V.P. 11211-064-A-001-AC 2139	CONDUIT STUB-UP DETAIL AT UEC
V.P. 11211-000-P-121-AC-163	UEC PSU-6401
60-DP-761	ELECTRICAL CONDUIT & CABLE SCHEDULE
064-DP-331 SHT 002	MISCELLANEOUS WIRING DIAGRAMS PT-6414, PGR-6414, ANNUN. PANEL (7)
64-DP-808	CONNECTION DIAGRAM. UEC-6401

No.	DATE	REVISIONS	BY	CHK'D	DES SUPV.	ENG'G	PROJ. ENGR.	APPR.
7	28MAY 2003	REVISED PER MOC• OF-02-PC-22	JNC	MMS	TAA	MMS	MMS	HHL
6	9JUN 2002	AS-BUILT FOR YEP INSTALLED EQUIPMENTS	JNC		TAA			HHL
5	24 MAY 1992	REVISED TO AS-BUILT (90-070)	ESC	[signature]	[signature]	[signature]		
4	21 MAY 1991	ADDED NEW SECTION IN SW-GR PS-6401 FOR PROJ. 90-070	JPA	[signature]	[signature]	[signature]	[signature]	[signature]
3	08NOV '86	REVISED TO INCORPORATE PROJECT NO. 84-058	FTS	[signature]		[signature]	[signature]	[signature]
2	5/11/86	AS-BUILT	S.W	[signature]	[signature]			[signature]
1	5/20/83	ISSUED FOR CONSTRUCTION	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]

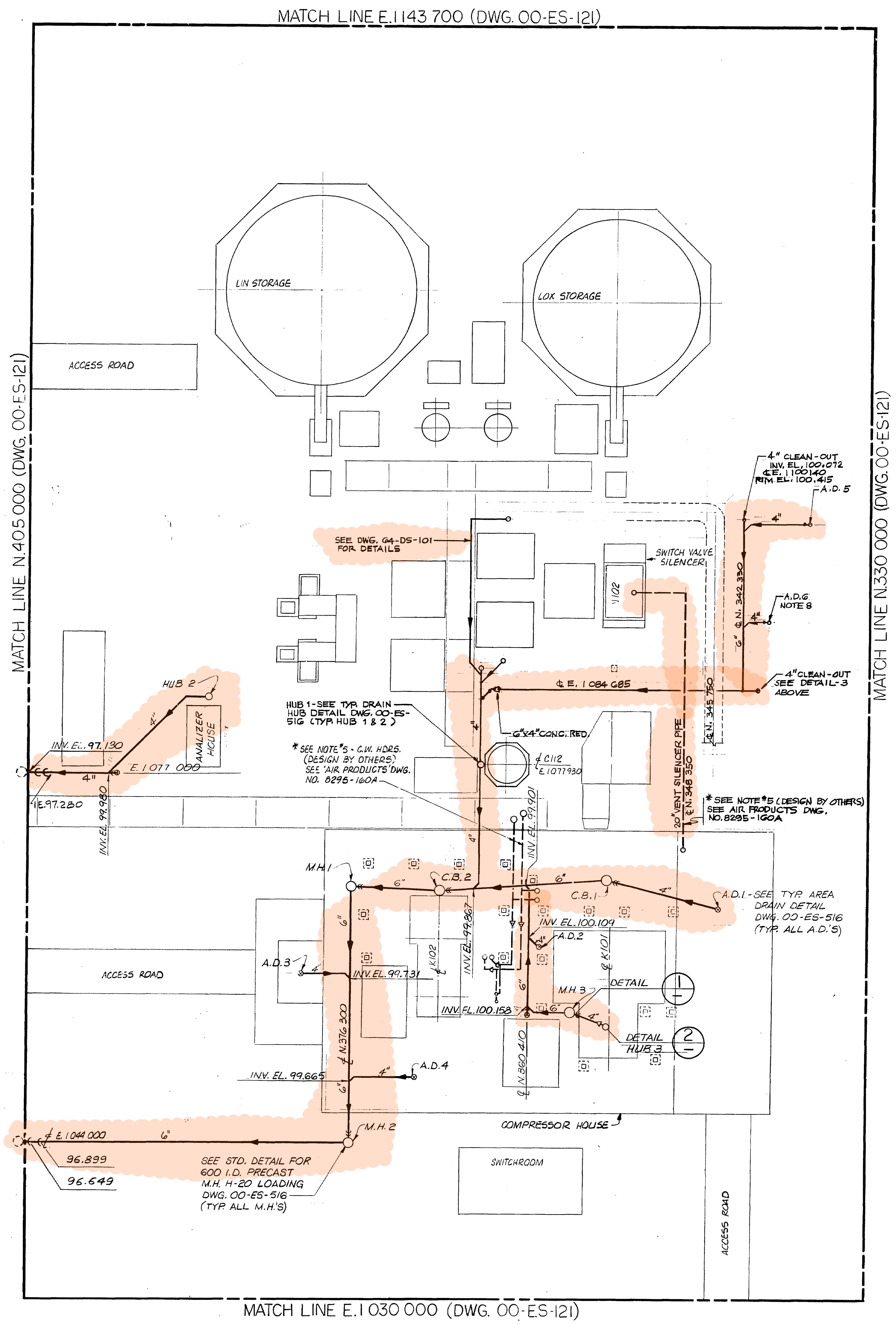
SCALE 1:20 | DESIGNED R.S.PATEL | DRAWN R.S.PATEL | CHIEF ENGR.

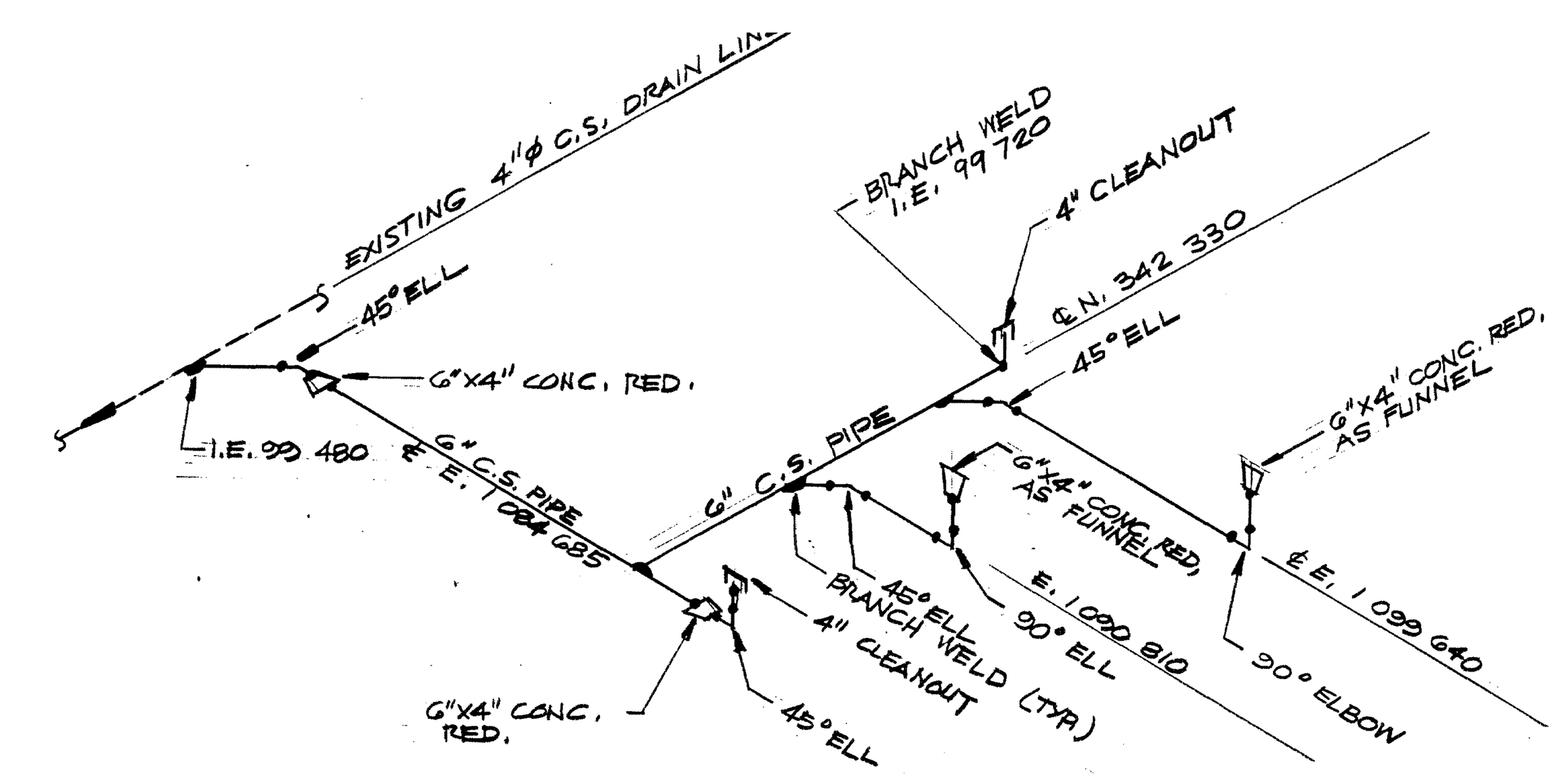
BECHTEL PETROLEUM, INC.
HOUSTON

SAUDI YANBU PETROCHEMICAL COMPANY

ELECTRICAL ABOVEGROUND POWER PLAN
UEC PSU-6401
UNIT 64 AIR SEPARATION

JOB No.	DRAWING No.	REV.
11211	64-EP-400	6



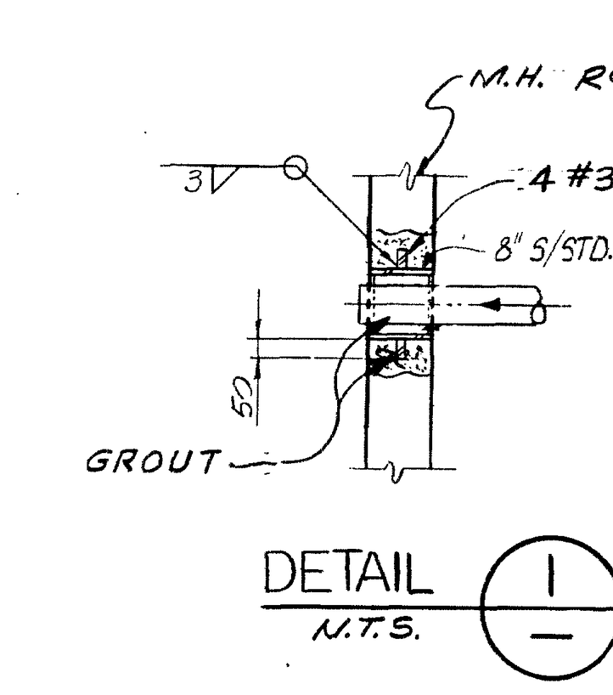


DETAIL 3

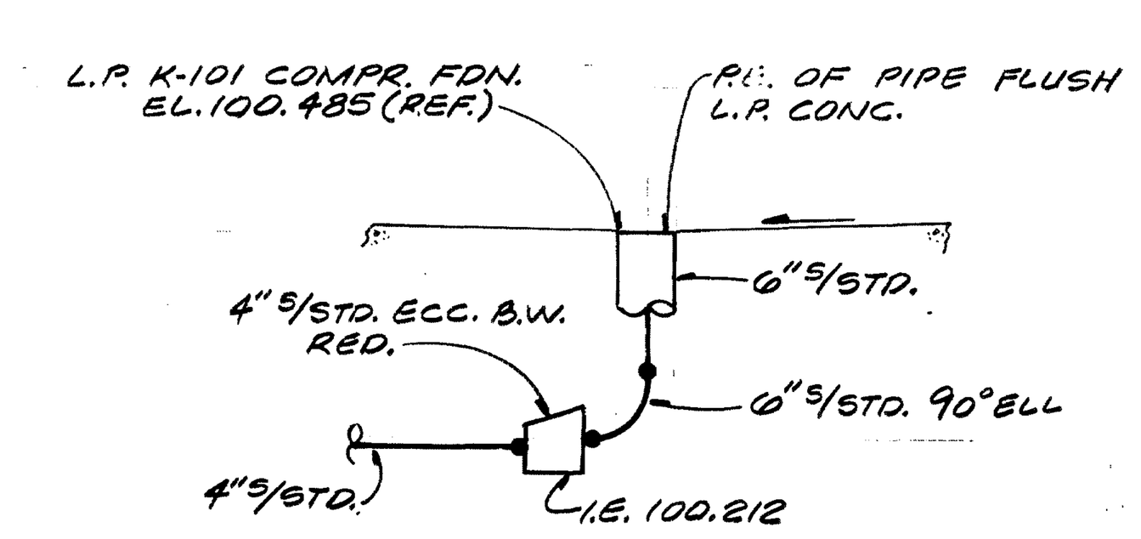
ALL INVERT ELEVATIONS INDICATED ARE BASED ON DATUM: (BECHTEL 100.50 = APL. 100.00)

U/G DRAIN SYSTEM SCHEDULE

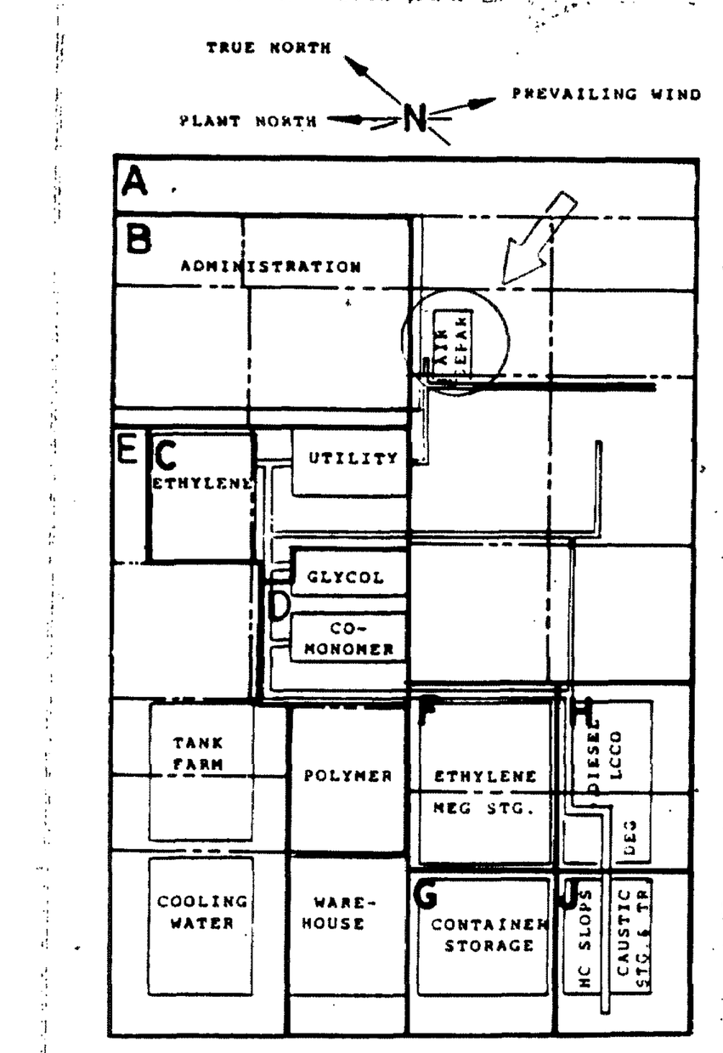
A.D., C.B., M.H. & HUB NO.	APL DRAIN DESIGNATION	COORDINATES @ ℄		INLET INVERT EL.		COMMON SEAL INVERT EL.	OUTLET INVERT EL.	RIM ELEVATION	BOTT. OF C.B. OR M.H.
		NORTH	EAST	NORTH-SOUTH	EAST-WEST				
A.D. 1	D.P. 6	343 300	1 065 000				100.100	100.485	
A.D. 2	D.P. 1	359 310	1 061 730				100.200	100.450	
A.D. 3	D.P. 10	380 500	1 059 240				100.100	101.335	
A.D. 4	D.P. 3	370 400	1 050 000				100.100	100.450	
A.D. 5	—	337 285	1 099 640				100.220	100.720	
A.D. 6	—	340 830	1 090 810				100.178	100.494	
C.B. 1	D.P. 4	353 260	1 067 500	100.00		99.650	99.950	100.450	99.500
C.B. 2	D.P. 2	368 400	1 066 680	99.845		99.595	99.845	100.485	99.445
M.H. 1	NONE	376 300	1 067 500	99.789		99.539	99.789	100.500	99.389
M.H. 2	NONE	376 300	1 044 000		99.621	99.371	99.621	99.890	99.221
M.H. 3	NONE	356 510	1 055 760	100.182		99.932	100.185	100.500	99.782
HUB 1	D.P. 8	364 775	1 077 930				100.245		
HUB 2	D.P. 12	387 950	1 084 050			99.900	100.100		
HUB 3	D.P. 5	353 260	1 054 545				100.212		



DETAIL 1
N.T.S.



DETAIL 2
1:10



KEY PLAN

LIST OF MATERIAL

ITEM	QUAN.	DESCRIPTION	ORDER NO.
1	3	CU. METERS CONCRETE fc = 21 MPa	000-Z-001
2		REINFORCING STEEL: NO. 3 / 4 / 5 / 6; KG. — / 66 / — / —	000-Q-C20
3	17	CONCO STD. RCP 600 I.D. x 300 L.G. SEC.	000-S-320
4	2	RICHARD FOUNDRY #A2280 FRAME & GRATE ATSM A-48 CL-30 H-20 LOADING	000-S-314
5	3	RICHARD FOUNDRY #A-2658 FRAME & SOLID COVER ASTM A-48 CL-30 H-20 LOADING	000-S-314
6	EA	GRATING-GP-5 PER DWG. 00-CS-518	000-M-010
7	10 L.M.	4" PIPE - C&W BE XS CS API-5L-B SMLS (PCC057)	
8	40 L.M.	6" PIPE - C&W BE XS CS API-5L-B SMLS (PCC057)	
9		90°-LR ELL BW STD CS A234 - WPB (WNC051)	
	2 EA.	4"	
	1 EA.	6"	
10		45° ELL BW STD CS A234 - WPB (WFC051)	
	3 EA.	4"	
	4 EA.	6"	
11	3 EA.	6"x4" CONC. RED. BW STD CS A234 WPB (WRC051)	
12.	2 EA	4" IPS THREAD BRASS PLUG W/CSK HEAD (FLUSH W/ PAVING)	
13	2 EA.	4" CS CPLG 3000 THD. MI 197 GALV.	

PROJ. No 90-070

NOTE:
FOR "L" CATEGORY PIPING, SEE SCREEN PRODUCED LIST OF MATERIAL FOR THIS DWG.

GENERAL NOTES

1. COMPR. HOUSE H.P. FINISHED FLR. EL. = 100.50
2. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. ALL ELEVATIONS ARE IN METERS. ALL PIPE SIZES ARE IN INCHES.
3. FOR GENERAL NOTES AND LEGEND SEE DWG. 00-ES-126.
4. ALL HORIZONTAL AND VERTICAL PIPING BENDS TO BE 45° U.N.O.
5. DESIGN OF PIPING PER AIR PRODUCTS LTD. - ENGLAND: MATERIAL FURNISHED BY BECHTEL INC. PER CONFERENCE NOTES CF-1650 & 1022.
6. ALL PIPE & FITTINGS ARE REFERENCED TO SPECIFICATION L-1, CD-20 (U.O.N.)
7. ALL UNDERGROUND PIPE AND FITTINGS TO BE COATED AND WRAPED PER SPEC. L-11.
8. USE 6"x4" CONC. RED. AS FUNNEL.

REFERENCE DRAWINGS

UNDERGROUND PIPING KEY PLAN	00-ES-126
TYPICAL UNDERGROUND DETAILS	00-ES-516
AIR PRODUCTS DWG. - U/G PIPING ISO DETAIL	8295-160A
AIR PRODUCTS DWG. - COMP. HOUSE FLOOR PLAN, SHTS. 3 & 4	M8295-120A
AIR PRODUCTS DWG - PIPE RACK & PLATFORM FND. DETAIL	M8295-130B
AIR PRODUCTS DWG. - D.C.A.C. - C112 & PUMP SKID FND. DET.	M8295-143A
AIR PRODUCTS DWG. - FDN. LAYOUT SHT. 1 & 2	M8295-150A
AIR PRODUCTS DWG. - TRANSFORMER & ANALIZER BLDG. SHT. 1	M8295-144A
DEMAG DWG. CONDENSATE OUTLET DETAIL	05510815
UNDERGROUND PIPING PLAN UNIT-00	00-ES-121
ELECT. UNGND., GROUNDING, AND LIGHTING PLAN	64-EP-300
ELECT. UNGND, GROUNDING, AND LIGHTING PLAN	64-EP-301
UNGND ELECT. CONDUIT LAYOUT	8295-408A
UNGND ELECT. CONDUIT CABLE LAYOUT	8295-110A

SCANNED

No	DATE	REVISIONS	BY	CH'K	DESIGN SUPV	ENG'R	PROJ ENGR	APPR
8	15 DEC 91	REVISED COORDINATES TO N.342 400 WAS 343 150.	AOC					
7	19 SEP 91	ADDED AD. 5 & 6 AND SEWER PIPE ROUTING PER PROJECT No. 90-070	AOC					
6	17/1/85	REVIEWED AS-BUILT, NO CHANGE	MHY	SE				
5	10/22/82	REV. KEY PLAN & DETAIL "1"; ADDED SEAL & DELETED "P"-TRAP	DM		JP	RJ OC	DM	
4	8/13/82	REVISED DETAIL '1' LIST OF MATERIAL & REV. ELEV.	K.S.	JP	JP	WW O.C.	DM	
3	7/26/82	REVISED ELEVATIONS	K.S	WH	JP	WW O.C.	GJR DM	
9	04 JAN 92	AS-BUILT PER PROJECT 90-070.	AOC	DJE	LMR	LMR		
1	5/22/82	ISSUED FOR CONSTRUCTION	JMS	RJ	JP	O.C.	GJR DM	

SCALE 1:200 U.N. | DESIGNED D. WANG | DRAWN D.H.T. 4/13/82 | CHIEF ENGR

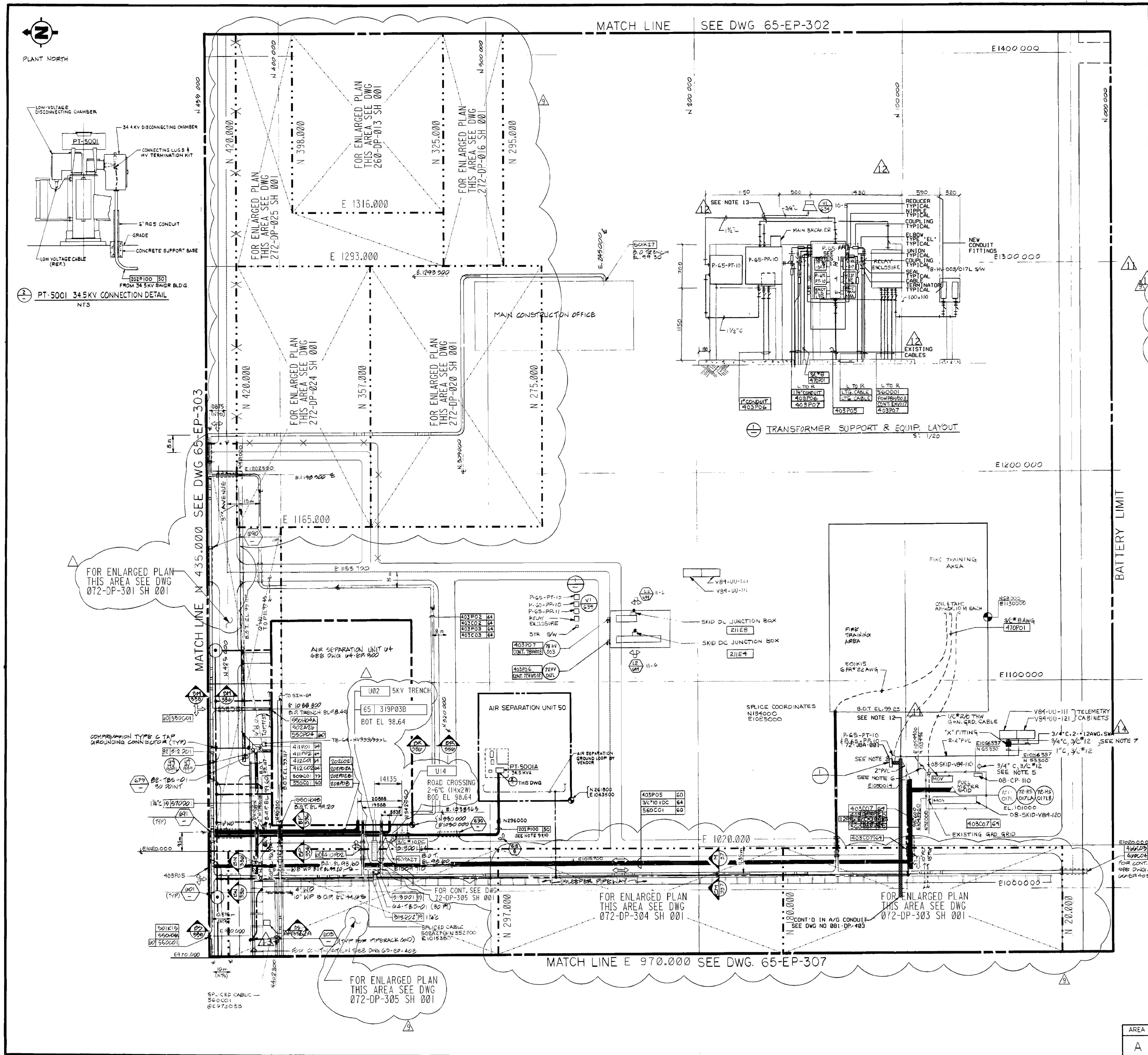
BECHTEL PETROLEUM, INC.
HOUSTON

SAUDI YANBU PETROCHEMICAL COMPANY

UNDERGROUND PIPING
PLAN, SECTIONS AND DETAILS
UNIT 64: AIR SEPARATION

AREA	JOB No.	DRAWING No.	REV
A	11211	64-ES-100	9

64-ES-100



NOTES

1. FOR GENERAL NOTES SEE DWG. 65-EP-303
2. REPLACE SELECTOR SWITCH FROM STOCK CODE #DQSFKI WITH PUSH BUTTON STOCK CODE # DTSFKI.
3. SEE DETAIL 1 FOR MOUNTING AND LAYOUT OF TRANSFORMER AND POWER PANEL FOR ARAMCO FUEL GAS METERING SKIDS. FOR CONNECTIONS AND NECESSARY MATERIAL, SEE DETAIL 00-AP-649
   LOCATE OUTSIDE HAZARDOUS AREA CLASS I, DIV 2 SEE ARAMCO DWG NB-E22496.
4. FOR FUEL GAS METERING SKIDS EQUIPMENT LAYOUT, SEE ARAMCO DWG. NA-E22307.
5. 125 VDC POWER FEED (CKT #6) FROM DC DISTRIBUTION PANEL IN UEC-6401 FOR SOLENOID VALVE 08-ZV-110 (@08-CP-110). FIELD TO INSTALL 15A BREAKER IN CURRENTLY BLANK POSITION (PNL. P-64-DCP-01)
6. FIELD TO CONNECT #4 AWG GROUND WIRE AT TRANSFORMER TO ARAMCO GROUND GRID SYSTEM. SEE ARAMCO DWG. NB-E22507.
7. FOR 120 VAC CONNECTIONS AT TELEMETRY PANELS. SEE ARAMCO DWG. NB-E22526 & NB-E22527.
8. FOR EQUIPMENT CONNECTIONS AND MATERIAL. SEE DWG. DETAIL 00-AP-649.
9. FIELD VERIFY ROUTING OF 34.5 KV CABLE AND MAINTAIN REQUIRED CLEARENCES AT EXIST. UNDERGROUND CABLE, PIPE AND OTHER OBSTRUCTIONS AS PER BECHTEL SPEC'S.
10. FIELD TO LOCATE AND PROVIDE AS-BUILT LOCATIONS OF 34.5 KV CABLE SPLICES.
11. FOR P-65-PP-11(R) PANEL SCHEDULE. SEE DWG. NO. 65-CP-
12. CONTRACTOR SHALL RUN THE POWER CABLES TO THE REQUIRED DESTINATION.
13. FOR NEW INSTALLATION DETAIL. SEE DWG. NO. 65-DP-422.

GENERAL NOTES

1. FOR GENERAL NOTES, SEE DRAWING 000-DP-001 SHEETS 001 AND 002.
2. FOR DRAFTING SYMBOLS, SEE DRAWING 000-DP-002 SHEETS 001 THROUGH 008.
3. FOR STANDARD ASSEMBLY DETAILS, SEE DRAWINGS 000-DP-003 SHEET 1 THROUGH 000-DP-015.

REFERENCE DRAWINGS

DWG NO	TITLE
00-AP-601	GROUND ROD INSTALLATION DETAIL
00-AP-690	CABLE ROADWAY CROSSING
00-AP-691	ISOLATING GROUND GRID
64-EP-300	UNDERGROUND, GND'G & LIGHTING PLAN
65-EP-104	34.5KV SINGLE LINE DIAGRAM
65-EP-302	UGND RACEWAY & GND'G PLAN
65-EP-303	UGND RACEWAY & GND'G PLAN
65-EP-307	UGND RACEWAY & GND'G PLAN
65-EP-338	SECTIONS & DETAILS
65-EP-760	CABLE SCHEDULE
66-EP-403	AREA LIGHTING PLAN
65-EP-105	ONE LINE DIA.-EMER. PWR SYSTEM
65-EP-337	UGND RACEWAY SECTIONS & DETAILS
65-CP-761	PANEL SCHEDULE P-65-PP-10 & P-65-PP-11

LEGEND

FOR LEGEND SEE DWG. 65-EP-303

BECHTEL PETROLEUM, INC.

No	DATE	REVISIONS	BY	CH'K	DESIGN SUPV	ENG'R	PROJ ENGR	APPR
13	28DEC 2004	AS-BUILT PER MOC• OF-99-PC-01	JNC	SM	TAA		DAS	AAF
12	23AUG 2002	AS BUILT YEP-06682064 AFC PER AFE • 2002-145	ACG JNC	MF ABK	BLK TAA	DR BAA	BAA	AAF AAF
14	3NOV 2010	REV./AS-BUILT AS PER MOC• OF-10-EPC-002	GNE		JB			
10	7JAN 2002	ISSUED FOR REVIEW & COMMENTS PER AFE • 2002-145	JNC	ABK	TAA	BAA	BAA	AAF
11	8JUN 2003	REVISED PER AFE• 2002-145	AVB	ABK	TAA	BAA	BAA	AAF

SCALE 1:600 DESIGNED BP DRAWN BP CHIEF ENGR

BECHTEL
HOUSTON

SAUDI YANBU
PETROCHEMICAL COMPANY

ELECTRICAL
UGND RACEWAY & GNDG PLAN
UNIT 65 DISTRIBUTION

AREA	JOB No	DRAWING No	REV
A	11211	65-EF-304	14

34 X 44 "E" SIZE

YANPET Operations Management System	Reference Number: YAN-OMS-316.10	
	Revision : 02	
Work Permits	EFFECTIVE DATE:	01/ 03 / 2023
	PAGE : 1 of 68	

YANPET OPERATIONS MANAGEMENT SYSTEM

Work Permits

YAN-OMS-316.10

	Title	Name & Signature	Date
Developed By	Safety & Health Engineer	Mohammad Melebari	14-Feb-2023
Reviewed By	U & O Sr.Manager	Ahmed Al-Zahrani	23/03/2023
Reviewed By	EHSS Sr.Manager	Sultan Al-Otaibi	23/03/2023
Approved By	President	Sameeh Al-Sahafi	23/3/2023

YANPET Operations Management System	Reference Number: YAN-OMS-316.10	
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Work Permits	EFFECTIVE DATE:	01/ 03 / 2023
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YANPET Operations Management System	Reference Number: YAN-OMS-316.10	
	Revision : 02	
Work Permits	EFFECTIVE DATE:	01/ 03 / 2023
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REVISIONS

Rev. #	Date	Brief Description
01	31-05-2020	Converted from SHE-MS to YAN-OMS format
02	14-Feb-2023	1- Multi task within one permit clause removed to meet SABIC requirements 2- Spelling check and correction 3- Editing all Work Permits to embed the new JLA form and removal of Risk assessment form to meet SABIC standard forms

YANPET Operations Management System	Reference Number: YAN-OMS-316.10	
	Revision : 02	
Work Permits	EFFECTIVE DATE:	01/ 03 / 2023
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1. PURPOSE

The purpose of this procedure is to describe the minimum requirements of the processes that shall be in place for work activities controlled through a work permit. The purpose of the work permit is to define the steps to be in place so that work activities are conducted in a safe and effective EHSS manner.

This procedure sets out the required approach to work activities controlled through the work permit process in accordance with YANPET Life Saving Rules.

The result of this sub-element is to ensure that:

1.1 All work activities are risk-assessed and adequate controls are in place so that the work and tasks are completed in a controlled, safe manner and without incidents

1.2 Personnel involved in managing, authorizing, monitoring and implementing work activities controlled through a work permit are trained, verified as competent and understand their responsibilities

1.3 The work permit process is audited at an appropriate level to ensure its continued effective implementation

1.4 A prevention / reduction in incidents related to failures or shortcomings is achieved using the work permit process.

1.5 Equipment are prepared, concerned personnel are informed of hazards and procedures, precautions taken, work is executed safely and adequate requirement is implemented. In order to eliminate / minimize the potential for harm to people, damage to the environment and equipment, it is essential that these work activities are appropriately risk assessed and correct/adequate control are identified/implemented.

2. SCOPE

The scope of this procedure covers all activities including, but not limited to, maintenance (routine and non-routine), project, construction, demolition and non-routine process operations performed by employees and contractors. Any work performed by operating personnel outside the scope of their normal operating responsibilities as defined in their Standard Operating Procedures (SOPs). These types of work activities shall be conducted through a work permit process that meets the requirements of this procedure, unless formally exempted from needing a work permit.

This procedure covers the minimum requirements to recognize the initial hazard and control, as a preparation using Hazardous Assessment and control Form Appendix (YAN-OMS-316.10V) for any work activity. Select the specific type of the work permit for carrying out work activities at YANPET facility.

2.1 This procedure specifies the minimum requirements of the work permit processes at YANPET Facility. These locations are define as:

2.1.1 Contractor operated facilities including warehouse operations when based on and within the battery limits of YANPET owned site.

2.1.2 Pipeline distribution systems within YANPET boundary.

2.2 All work activities require at least a Hazardous Assessment and Control form Appendix (YAN-OMS-316.10V) unless:

2.2.1 The activity is specifically exempt from the need for a Work permit as per this Management System.

2.2.2 The work activity is perform within identified permit-exempted area.

2.2.3 The activity is within the scope of an applicable Standard Operating Procedure (SOP).

2.2.4 The activity is within the scope of a specified and applicable SMP at site level (this must be defined at level based on Risk assessment process as per YAN-OMS-311).

2.2.5 All areas that are exempted from the requirement of issuing and/or using work permits for specified activities shall be identified, subjected to a risk assessment process as per YAN-OMS-311 and approved by the appropriate leadership member(s) and communicated to all concerned.

2.2.5.1 The following are the areas exempted by clause number 2.2.5:

a) YANPET Operation activities, which are executed under SOP.

b) Day-to-day maintenance activities carried out inside designated maintenance workshop areas under SMP.

c) Day-to-day activities carried out inside fire station under approved procedure.

d) Municipal waste (Garbage truck operations) located on streets (not inside plant)

2.2.6 In Vehicle fueling station, if there is any type of maintenance activity or loading activity then work permit system to be applied.

2.2.7 Vehicle refueling in the station does not require a work permit, but clear approved instruction list of how to do refueling to be clearly displayed at location (posted).

2.2.8 All activity performed in area between gate 1 and gate 2 shall be treated as following:

2.2.8.1 Street and parking area including Landscaping & irrigation activity under security responsibilities.

2.2.8.2 Owners of Administrator building with mosque shall assign permit issuers and permit receivers.

2.2.8.3 Owners of Security building shall assign permit issuers and permit receivers.

Therefore, this procedure applies to activities including maintenance, project, construction, demolition and non-routine process operations (note; this is not an exhaustive list).

Note: All areas that are exempted from the requirement of issuing and using Work Permits for specified activities shall be identified, subjected to a risk-assessed process such as HAZAMS, task risk assessment etc. approved by the appropriate leadership member(s) and communicated to all concerned.

3. ROLES AND RESPONSIBILITIES

This procedure was developed based on the position/title respective to approved Organization Structure in accordance to Site Organization Design procedure (-YAN-OMS-121). The Table #1.0 RACI Matrix illustrates the key

roles and responsibilities for high-level activities that are described by this procedure. Other specific roles and responsibilities for activities that are detailed in the requirement section shall be followed accordingly.

Activity Description	YAN-OMS Chairman	E/SE Leader	EHSS Sr. Managers	Ops / Mtc Sr. Managers	Ops / Mtc Managers	Safety Engineer	Issuers	Receivers	Dept. SHEM Administrators	Specialist O/M Coordinator	Gas Tester	Civil Engineer	Electrical Engineer	Mechanical Engineer
Develop, review, training and measure effectiveness of this procedure.	A	R	I	I	I	R	I	I	I	I	I	I	I	I
Coordinate work activities with issuer & receiver supervisors for hazard assessment and Formal JLA form preparation	-	C	-	A	R	C	R	R	C	R	-	-	-	-
Prepare Hazard Assessment & Control and basic steps formal JLA	-	C	-	A	R	C	R	R	C	C	-	-	-	-
Discuss the work for all types of work permits details with affected area issuer.	-	C	-	A	R	C	R	R	C	-	-	-	-	-
Participate in joint site with permit issuer and accept the permit	-	C	-	A	R	C	R	R	C	-	-	-	-	-
Before performing the actual work fill in the LMRA and explain it to the working crew	-	C	-	A	R	C	R	R	C	-	-	-	-	-
Perform gas test before authorizing any work permit and record the results.	-	C	-	I	I	C	A	C	C	-	R	-	-	-
Fill Section 2 Fill section 3 in the excavation Clarence to Provide relevant drawings, approve shoring plan with calculations	-	C	-	A	I	C	R	I	C	-	-	R	I	I
Fill section 3 in the excavation Clarence by marking up on relevant drawing for any underground cable.	-	C	-	A	I	C	R	I	C	-	-	I	R	I

Activity Description	YAN-OMS Chairman	E/SE Leader	EHSS Sr. Managers	Ops / Mtc Sr. Managers	Ops / Mtc Managers	Safety Engineer	Issuers	Receivers	Dept. SHEM Administrators	Specialist O/M Coordinator	Gas Tester	Civil Engineer	Electrical Engineer	Mechanical Engineer
Fill section 4 in the excavation Clarence by Ensuring any underground pipelines, structure beams/obstacles	-	C	-	A	I	C	R	I	C	-	-	I	I	R
Periodic Work Permit audits	A	R	A	I	I	R	I	I	I	-	-	-	-	-

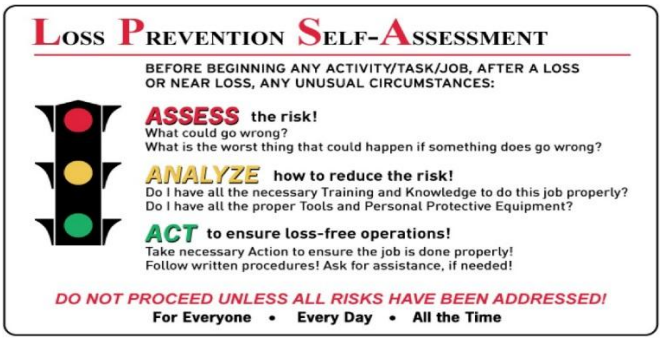
Table #3: RACI Matrix

4. REQUIREMENTS

4.1 Loss Prevention SELF ASSESSMENT (LPSA): is a brief, general risk assessment conducted prior to the start of a work activity or task, regardless of the need for a work permit for this activity or not.

4.1.1 LPSA shall be conducted before beginning of any activity, after a loss or a near loss and for unusual circumstances.

4.1.2 The LPSA is a three-step mental risk-assessment process:



4.1.2.1 The first step of the LPSA is to “ASSESS the risk!” Everyone must assess the risks associated with each job. Everyone should assess risks and ask what could go wrong? What is the worst thing that could happen if something does go wrong?

4.1.2.2 As example:

a) Are there materials on the floor that could trip a worker?
b) Is lighting adequate?
c) Are there any electrical hazards at the job site?
d) Are there any explosive hazards associated with the job? Can any develop?
e) Are tools, including hand tools, machines and equipment in need of repair?
f) Is there excessive noise in the work area, hindering worker communication?
g) Is fire protection equipment readily accessible? Have I been trained to use it?

4.1.2.3 The second step of the LPSA process is to "ANALYZE how to reduce the risk!" The individual should evaluate each risk identified during the "assessment process" to ensure appropriate safeguards are in place to control the risk.

4.1.2.4 The third step is to "ACT to ensure loss-free operations!" The employee should take the necessary "steps" to ensure the job is done properly. This step includes taking appropriate action such as locking out equipment, placing warning cones, positioning trucks, standing out of the line-of- fire, following operating procedures, reviewing data tables, verifying accuracy of data entry, etc.

4.1.2.5 Loss Prevention SELF ASSESSMENT CARD: The LPSA card is

4.1.2.6 Intended to be used as a personal reminder to think about the loss prevention aspects of a job. This card also reminds us that we as individuals are responsible for, and empowered with, the appropriate authority to "ensure that no work is performed or continued if it cannot be done properly."

4.2 General

4.2.1 The applicability of this procedure and each requirement given therein against all managed activities/facilities are evaluated during the development of this management system. This procedure is developed and controlled in accordance with Policy and Management System Development procedure (YAN-OMS-231).

4.2.2 SABIC Global Assurance shall be consulted, for any clarification to this procedure in accordance with Policy Management and System Development procedure (YAN-OMS-231).

4.2.3 Position(s) assigned with the responsibility of ensuring compliance with this procedure in accordance with Site Organization Design procedure (YAN-OMS-121).

4.2.4 Roles and responsibilities of all other positions/functions responsible for supporting implementation of this procedure are clearly identified, documented, and communicated as in accordance with Stakeholder Communication & Engagement procedure (YAN-OMS-233).

4.2.5 This procedure is developed and reviewed considering all applicable local/ national/ regional/ international regulations, standards and other specific requirements to which YANPET subscribes, with reference to the process described in Compliance, Assessments and Evaluation Procedure (YAN-OMS-

232). Element / Sub-Element, shall confirm inclusion of identified legal and regulatory requirements in this procedure and shall be complied within YANPET daily practices.

4.2.6 Suspension (Temporary Stop)

All permit conditions are to be complied with work permit procedures requirements at all times. Any deviation, without appropriate authorization, shall be result in immediate suspension of the permit. (Any employee can do the suspension and report it to the Issuer).

In case of an emergency/fire alarm situation in that specific area, the work permit shall automatically be suspended, it shall be revalidated before work can commence again.

4.2.7 The following conditions shall cancel Work Permits:

4.2.7.1 If work is not started within two hours after issuance of permit, or if there is an interruption of work for more than 2 hours.

4.2.7.2 Change of work environment conditions in the unit or area, e.g., venting, liquid hydrocarbon spillage.

4.2.7.3 Injury or accident during execution of work.

4.2.7.4 When emergency alarm is sounded / activated in effected unit.

Note: Emergency drill / fault alarms shall not cancel the issued work permits.

4.2.8 Closure of each Work Permit can take place only when:

4.2.8.1 Conduct Joint Site visit by both Issuer & Receiver prior closing the permit as per level authority.

4.2.8.2 The Work Permit Receiver shall ensure that:

a) All persons have withdrawn from the work site.
b) All tools and equipment have been removed.
c) All openings / enclosures have been closed, secured and/or barricade to prevent unauthorized access.
d) The work area is left clean and tidy.

4.2.9 The Permit Issuer shall: (see section 4.2.28 Permit Issuing & Receiving Authority)

4.2.9.1 Verify the conditions and safeguards as reported by the receiver are accurate.

4.2.9.2 Together with the receiver, close the Work Permit, with both parties signing and dating their confirmation of the safe condition of the equipment and work site.

4.2.10 Work permit shall not be issued to cover a whole unit or plant and Blanket Work Permits shall not be issued in any YANPET facility.

4.2.11 Individual work permit shall be issued for each task.

Note: Housekeeping shall not have a separate permit, because it shall be covered under the related permit in the area unless there is a separate housekeeping activity being done that is not related to an active maintenance activity.

4.2.12 No Photocopies (Xerox copies) shall be made to substitute for the Work Permits or technical confirmation forms such as excavation clearance, lifting plan and LOTO Certificates.

4.2.13 Associated certificates shall not be used or accepted as enough approval of the non-operational work without approved work permit.

4.2.14 LOTO certificate, Excavation clearance & Lifting plan shall not be closed unless related permits are completed and closed.

4.2.15 Ensured /Confirmed PPE's are inspected before use.

4.2.16 Ensured /Confirmed tools are inspected before use.

4.2.17 The plant/area owner shall be responsible for issuing work permit within owner department boundaries.

4.2.18 Work permit to be issued on common facility require obtaining affected department counter sign.

4.2.19 Issuer and Receiver cannot be the same person, however can be from same department.

4.2.20 Issuers shall be track all issued work permits and shall record it in Work Permit Control Sheet (Appendix YAN-OMS-316.10S).

4.2.21 After signatures from the Issuer and the Receiver, each one shall keep a copy of the Work Permit.

4.2.22 When the job is completed, the Permit Issuer and Receiver sign off the permits and they exchange the permit copies. All Work Permit forms shall be retained for minimum 3 months' period.

4.2.23 All Permits issued for equipment shall be closed prior to start-up of the equipment/process.

4.2.24 The Permit Issuer of Work Permit shall ensure that:

4.2.24.1 Hazard Assessment and Control Form (Appendix YAN-OMS-316.10V) and all Work Permit sections have been filled properly, completely and accurately.

4.2.24.2 Hazard Assessment and control Form and all work permit sections are signed by designated positions written in Work Permit forms.

4.2.24.3 The equipment and area are prepared and it is safe to perform the work.

4.2.24.4 Process Isolation (valves are closed, blinds are installed, lines are disconnected and vent / drains are opened) of the equipment as required for the assigned work as per Control Isolation of Hazardous Energy including LOTO procedure (YAN-OMS-316.11).

4.2.24.5 Electrical LOTO obtained/ followed (e.g. Power De-energized) as per LOTO certificate requirement according to Electrical Safety procedure (YAN-OMS-316.05) and Control Isolation of Hazardous Energy including LOTO procedure (YAN-OMS-316.11).

4.2.24.6 Gas test conducted for all permits as required with considering the allowable concentrations & safe ranges.

4.2.24.7 Identify hazards associated from surrounding area, including potential for exposure to Heat and Cold Stress procedure (YAN-OMS-3110.06) and appropriate actions, including communication, PPEs, and other administrative and engineering measures taken for the safety of personnel who will carry out the assigned task.

4.2.24.8 Joint site visit (where the work is to be performed) is carried out along with the Permit Receiver of the Work permit for the area and equipment, before the Work permit is issued, to assure that the conditions and precautions are satisfactory for the work to proceed and

to indicate the nearby eyewash, emergency shower emergency assembly point/ Safe assembly area and fire extinguisher.

4.2.24.9 The Permit Receiver understands the requirements, PPEs to be used, other precautions given in the Work permit/ Hazard assessment and control Form and any potential of unusual conditions related to the job.

4.2.24.10 After completion of work, Work permit is closed before re-starting the equipment on which the work was performed and cosigned with issuer.

4.2.24.11 The Issuer of the work permit shall inform the concerned supervisor(s) of all the area/dept. that may affected by work and obtain their initial on the work permit.

4.2.24.12 The issuer of the work permit shall convey relative information about the issued work permit to his reliever.

4.2.24.13 The Permit Issuer shall assign concerned area operator to monitor the activity of work permit within his boundary.

4.2.24.14 The Permit Issuer shall keep the original copy in control room.

4.2.24.15 In case Permit Issuer has to leave his shift for any valid reason, he has to delegate the responsibility to another “Permit Issuer” of equivalent authority or above to carry out the responsibilities and make endorsement.

4.2.24.16 The Permit issuer is responsible for the area where the Work permit is issue.

4.2.24.17 Issuer shall not issue the permit with validity beyond his working hours.

4.2.24.18 Permit issuer shall notify the receiver and / or the work crew on conditions change and an evaluation be made as to revoking, revising, or reissuing of the permit.

4.2.24.19 Permit issuer shall ensure removal of grating, handrails or created opening by using separate work permit and using with attached working at height YAN-OMS-316.09 temporary Removal of Grating (Platform) Guard Rail checklist. (ex.: separate work permit means if you have a maintenance activity such as pump removal ...etc. that require grating removal. So, you have to issue two work permits for pump removal and grating removal).

4.2.25 Permit Receiver shall ensure: (see section 4.2.28 Permit Issuing & Receiving Authority)

4.2.25.1 The job was understood as what, where and how to be performed.

4.2.25.2 His entire crew is qualified to perform the activity as per Training & Competencies procedure (YAN-OMS-131), JQP and Third Party EHSS Management procedure (YAN-OMS-313).

4.2.25.3 Working crew shall comply with approved SMP, Hazard Assessment and Control form Appendix (YAN-OMS-316.10V) or Job Loss Analysis (JLA) YAN-OMS-311.02.

4.2.25.4 Comply with all the requirements and precautions stated in the Work Permit.

4.2.25.5 Availability of standby-man and fire watch whenever permit issuer mentions in work permit form.

4.2.25.6 Electrical, Steam, Pneumatic and/or any other type of LOTO, as required, is performed.

4.2.25.7 Communicate any change in the condition or any abnormality observed to the Permit Issuer.

4.2.25.8 Housekeeping is maintained before, during and after job.

4.2.25.9 Permit Receiver shall conduct the "LMRA" Last Minute Risk Assessment method which is used to help executers to think and implement safety precautions before any job is started. Means to take two minutes before starting any job to think about (thinking before acting) and applying crewmember personal lock and Lock-Out Tag-Out for the equipment before starting the job.

4.2.25.10 "LMRA" assessments are carried out in the field prior to starting any tasks/ jobs by the people doing the work.

4.2.25.11 To leave his shift for any valid reason, he has to delegate the responsibility to another "Permit receiver" of equivalent authority or above to carry out the responsibilities. New delegate shall sign the forms and make endorsement.

4.2.25.12 The permit hard paper copy is available\displayed at the worksite or preferably is displayed at a visible location near the worksite, until the job is completed.

4.2.25.13 To attend to next shift issuer for extension or closing the work permit as required, work shall not be resumed or Confined space re-entry made until this has been accomplished.

4.2.25.14 Close the work Permit by same issuer and receivers unless it is closed by their relievers after doing endorsement/and extension in one-hour shift change.

Note: After signatures from the Issuer and the Receiver, each one shall keep a copy of the Work Permit.

4.2.26 Permit issuer and permit receiver field visit shall achieve the following requirements:

4.2.26.1 Confirm that the exact work location is understood and that all required identification tags are in place.

4.2.26.2 Confirm that the work scope is understood, the conditions of the plant are as expected and that all required control measure are in place.

4.2.26.3 Demonstrate that the plant has been de-energized and confirm the isolations required are in place.

4.2.26.4 Comply with the control measures identified on Hazard Assessment and Control Form (Appendix YAN-OMS-316.10V).

4.2.27 Extension / Endorsement of the Permit (Re-validation)

4.2.27.1 Extension of work permits shall be done by Permit Issuer and Receiver in case the task not completed on agreed time. Revalidation is permitted subject to the following controls:

a) Scope of work activity remains as defined on the work permit.

b) Control and mitigation measures as stated in the work permit and any/all additional permits are in place.

c) The conditions at the location of the work activity have not materially changed such that additional precautions are required or that the work permit related risk assessment process is no longer valid.

d) No additional safety consideration has changed from the original work permit related risk assessment process.

e) In the event of the risk assessment process no longer being valid due to changes or omissions, a review of the risk assessment shall take place prior to revalidating the work permit.

f) Ensure members of the work team and others impacted by the work activity have been notified about the assessed risks and the control and mitigation measures required preventing or minimizing the potential for an incident.

g) The issuer revalidating the work permit ensures that the receiver understands the content of the work permit:
   1. Work activity scope.
   2. The requirements in hazard assessment & control form and mitigation measures.
   3. Emergency response actions.
   4. Recognizing that any changes in the original intent as stated on the work both in terms of activity and controls/mitigation permit will invalidate that work permit, and therefore work shall cease and the receiver report the status immediately to the issuer.

h) During the first hour of the turnover (shift change), receiver and issuer shall communicate all information regarding the Permits that they endorsed\extend and discuss the site status before endorsement.

i) During the first hour of the turnover, the work can be resumed with responsibility of the permit receiver. Furthermore, the next shift issuer is responsible and accountable for the renewal (extension and/or endorsement) / within the first one hour.

j) Endorsement shall be made for the followings:
   1. When both or either one of issuer or receiver leave the field before the time of the permit duration.
   2. In case of work permit activity need to execute with high risk, then management approval shall be obtained.

4.2.28 Permit Issuing & Receiving Authority

Type of Work Permit	Activity	Permit Issuer (Direct Hire Only)	Permit Receiver
General Work Permit	Work that does not create Heat/ Sparks	Trained / Qualified/ Certified Authorized Operator and above	Trained/ Qualified/ Certified/Authorized Direct/contractor Technician/ Area owner Personnel or above

Type of Work Permit	Activity	Permit Issuer (Direct Hire Only)	Permit Receiver
Hot Work Permit	Activity capable of supplying ignition energy for igniting flammable mixtures or combustible materials that may be released to create a potential fire or explosion hazard	Trained / Qualified/ Certified Authorized Area Supervisor/ Lead/ Selected senior operator	Trained / Qualified/ Certified Authorized Supervisor/ Lead Technician /Contractor (Supervisor or Foreman) Selected senior technician- direct hire only
	Hot Tapping	Trained / Qualified/ Certified Authorized Area Supervisor and counter sign by Area owner Sr. Manager	Trained / Qualified/ Certified Authorized Supervisor & counter sign by Concerned Maintenance/Technical Sr. Manager
Confined Space Entry Permit	Duties inside confined space	Trained / Qualified/ Certified Authorized Area Supervisor	Trained / Qualified/ Certified Authorized Supervisor-Direct Hire
Electrical work Permit	Electric activities	Trained / Qualified/ Certified Authorized Area Supervisor/ Lead	Trained / Qualified/ Certified Authorized Electrical as authorized as per Electrical Safety procedure (YAN-OMS-316.05) and (YAN-OMS-316.10)
Radiation Permit	Work include Radiation Hazards	Trained / Qualified/ Certified Authorized Area Supervisor / Lead	Trained / Qualified/ Certified Authorized Direct / Contractor RSO.
Lifting Work Permit	Work include Lifting Activities	Trained / Qualified/ Certified Authorized Area Supervisor/ Leader	Trained / Qualified/ Certified Authorized Direct/contractor Supervisor/ Lead
High Pressure Jetting Work Permit	Work include High Pressure Jetting Activities	Trained / Qualified/ Certified Authorized Area Supervisor/ Leader	Trained / Qualified/ Certified Authorized direct / contractor Technician or above.
Excavation Work Permit	Work include Excavation Activities	Trained / Qualified/ Certified Authorized Area Supervisor/ Leader	Trained / Qualified/ Certified Authorized Direct/contractor Supervisor/ Lead
Hazard assessment & control form	For any activity related to work permit expect confined space	Trained / Qualified/ Certified Authorized owner Supervisor	Trained / Qualified/ Certified Authorized Direct/contractor Supervisor

Table #4.2.28: Permit Issuing & Receiving Authority

4.2.28.1 For operational non-routine activities and operational routine activities inside confined space, the below table for Permit Issuing & Receiving Authority to be followed:

Type of Work Permit	Activity	Permit Issuer (Direct Hire Only)	Permit Receiver
Confined space entry permit	Routine or /and Non-Routine operation activity inside confined space	Trained / Qualified/ Certified Authorized Unite supervisor	Trained/ Qualified/ Certified/Authorized Operator and counter sign by unit manager
General Work Permit	Non-Routine operation activity outside confined space	Trained / Qualified/ Certified Authorized Unite supervisor	Trained/ Qualified/ Certified/Authorized Operator and above

a) The definition of non-routine (standard) not in SOP means that the activity never conducted before or being performed for the first time and it is not in procedure (SOP). If the activity repeated then it shall be added in SOP.

b) All non-routine activity required to conduct formal JLA as per YAN-OMS-311.02

4.2.28.2 Only Direct hired Supervisor is authorized to issue or receive confined space entry permit

4.2.28.3 In case of Unit Supervisor is not available, unit official delegate will issue the permit.

4.2.28.4 Unit management (sr. manager) can nominate Selected senior operator / senior technician (direct hire only) to have an authorization based on his competency for hot work permit after obtaining the EHSS approval as Trained / Qualified / Certified / Authorized personal.

4.2.28.5 Exception: During non-working hours such as (Coverage Group or On-Call Technician) Receiver Senior Technician can be authorized to receive Hazard assessment & control form and all Work Permit except Confined Space and Lifting after fulfilling the below requirements:

a) Shall be nominated and approved by concerned Department Senior Manager for the authorization by EHSS Department.

b) Total Technician experience shall be more than 5 years and Supervisor not available.

4.2.28.6 The below guidance table is the authorization level for below conditional activity:

Condition	Authorization
Day to day activity	General, excavation, hydro jetting, lifting, Hot, Electrical, Radiation work permits receiving by Certified/ Authorized direct hire, SMP, & service contractor. b).Confined Space Entry Permit receiving by Certified/ Authorized supervisor / Assigned supervisor direct hire.

Condition	Authorization
TAM or Major shutdown	All types of work permit receiving by approved Certified/ Authorized direct hire, SMP & service contractor except Confined Space Entry to be by Certified / Authorized supervisor / Assigned supervisor (As per TAM/site project temporary organization) Permit by direct.
Site Project	All types of work permit receiving by approved Authorization except Confined Space Entry to be by Certified / Authorized supervisor / Assigned supervisor* Permit by direct Note: If the receiver not available within the site project, the concerned unit should assign receiver from Their side as per the above criteria.

Table #4.2.28.6

Note:

a) Official delegation for the period of more than one week, Temporary card shall be printed by EHSS.
b) For the period of less than one week, official delegation form is enough to use.
c) Temporary card must be returned back to EHSS once it expired.
d) Temporary (TAM/site project temporary organization) shall be approved by concerned Department Senior Manager.

4.2.29 Validity of the Permit and Certificate.

Type	Maximum Validity
General, Hot, Confined Space entry, Electrical, Radiation, Lifting, HPW Jetting & Excavation Work permit	12 hours
Lifting Plan Technical Confirmation, Excavation Clearance Technical Confirmation & LOTO Certificate	Until completion of the Work Scope

Table #4.2.30: Validity of the Permit and Certificate

4.3 Permit Process Overview

YANPET Operations Management System	Reference Number: YAN-OMS-316.10	
	Revision : 02	
Work Permits	EFFECTIVE DATE:	01/ 03 / 2023
	PAGE : 17 of 68	

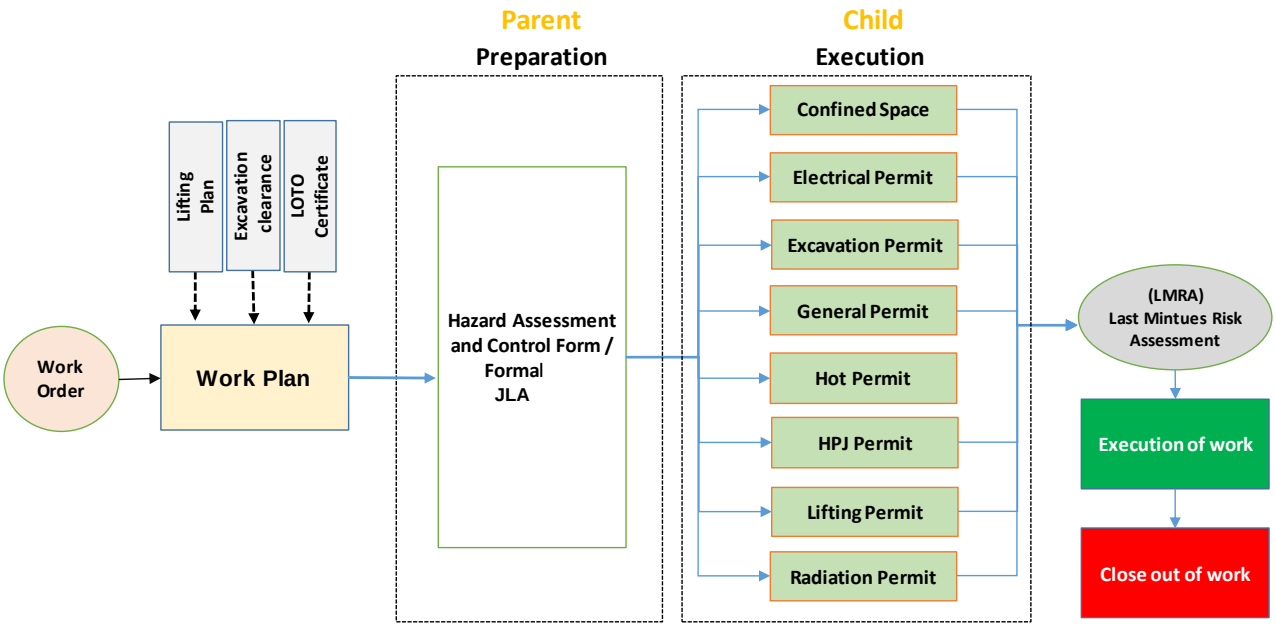


Figure #1: Permit Process Overview

4.3.1 Visual inspection or taking gauge readings can be exempted from issuing work permits. However, if the visual inspection/ taking gauge readings /safety audit/area verification is inside the confined space, then the entry person need to add the task under the confined space permit.

4.3.2 Planning of Work

The person(s) having the responsibility for planning the work activities shall:

4.3.2.1 Planner shall communicate all associated preparation of Lifting Plan Technical Confirmation & Excavation Clearance Technical Confirmation for work permit processes to all concern people and provide sufficient resources and time to enable all activities including the work permit processes to be completed to plan.

4.3.2.2 Operation Area Specialist /Maintenance Coordinator communicate with supervisor receiver to conduct Hazardous Assessment & control form and preparation of Work permit Activities Forms and as per assessment outcome ensure the risk level is properly mitigated or request to conduct formal JLA further as per YAN-OMS-311.02.

4.3.3 Preparation of Forms:

4.3.3.1 Hazardous Assessment & Control Form:

A Hazardous Assessment& Control Form is a process to recognize Hazard Assessment and Control Form (Appendix YAN-OMS-310.10V) for any work activity.

a) To select the specific type of permit.

b) Issued and received by supervisors the authorized personnel of the area where work is to be performed even during urgent / an emergency.

c) A Hazardous Assessment and control form is the master document for all work permit types except Confined Space Entry Permit that is required Formal JLA as per YAN-OMS-311.02 (Operation Area Specialist / Maintenance Coordinator shall organize the Hazardous Assessment and Control Form document once all the risk relevant identified and risk assessed as well as defined control measures are in place and complete.

d) Hazardous Assessment and control form can be utilize for different time with the same scope of work activity after approval of Area Owner Managers and Maintenance Managers.

e) Issuer/receiver supervisor shall conduct the hazard evaluation then record risk rating at backside (Section-6) of Hazardous Assessment and Control form referring to risk evaluation guidelines table.

f) Hazardous Assessment and control Form shall be replace with new Hazardous Assessment form in case of the execution team competency changed.

g) Validity of this form is one week unless endorsed by both Owner Manager & Maintenance Manager up to 30 days.

h) Hazard assessment & control form retention record of the re-validated & completed forms shall be kept and available with area owner.

i) Review & Revalidate Hazardous Assessment & control form through revalidation Approval Process (Section-07) before execution of the task.

j) The decision on the requirement for a higher-level risk assessment JLA as per YAN-OMS-311.02 shall be based on a TRF-Score (Total risk Factor) of 6 or more or when in doubt with a lower score in concurrence with the UOM. Whenever a TRF-Score of 6 or higher is identified, the Unit Operations Manager (UOM) shall be consulted. When the TRF-Score is 6, 7 or 8 the Permit Issuer together with the UOM shall decide on the necessity to complete a JLA. When a TRF-Score of 9 or 10 is calculated, a JLA as per YAN-OMS-311.02shall be completed by definition.

k) The following criteria shall be considered during Section-06 Risk evaluation guidelines Appendix (YAN-OMS-316.10V) for A, B and C risk factors as the followings:
(A) Potential Consequence of Error:
Potential of Consequences shall be identified through Hazardous
Assessment and control form section-2 (using question-1 and 2) as very low / low (2), moderate (4) and very high / high (6) with reference to YANPET risk matrix Consequence.
(B) Performed Task Complexity:

Task Complexity has to be identified through Executer team capability, performed task steps and the condition of surrounding area.

(C) How Frequent Is Task Done By Team (Executer):

Based on how many time Executer Done the Task as often (Daily / Weekly / Monthly), Once in a while (At least one in every 6 months) and never.

4.3.3.2 Excavation Clearance

Excavation is any work that requires breaking the earth's surface or pavement including the removal of previously installed roadways, slabs or foundations at or below the surrounding ground level at 10 cm depth or more. Initially create Excavation Clearance for any excavation work activities with the following:

a) Excavation Clearance (YAN-OMS-316.10O), which contains all the requirements, must be filled before issuing the work permit; this Excavation Clearance only preparation stage to be ready. Authorization to perform the job, work permit is required, including:
   1) Determination of the presence and locations of under-ground services of area to be excavated.
   2) Marking out / identification on the ground the exact location and area of the excavation.
   3) Location of all known underground services shall be physically located before permitting any machine excavation.
   4) Defining the type of excavation, manual and/or machine excavation.
   5) Respective discipline shall use cable locator or other techniques such as exploratory excavation to identify location of underground services, if no drawings available.

b) De-energize and / or isolate underground services, if possible, for excavation. Otherwise, establish method of excavation to minimize hazards by such means as:
   1) Trail pit by hand excavation along the area to be excavated.
   2) Use of hand-tools in area of underground services.
   3) Insulate men and equipment from possible electrical contact.
   4) Use tools or equipment that will reduce possibility of damage to underground services and hazard to worker.

c) Ensure a plan provided by a Civil Engineer and approved by concerned owner department Sr. Manager for excavations in excess of 3 meters, adjacent to structures, subject to vibration or ground. Calculations in support for the shoring type / method shall be specified in clearance form.
   1) Work permit Issuer shall ask for gas testing with its frequency for the excavation & shall carry joint site inspection with permit receiver and define scope of excavation clearly in the excavation clearance.

2) Permit receiver is responsible to ensure Civil Engineer shall establish load carrying capacity of soil for safe use of mobile industrial equipment in or around excavation. Provide suitable protection against collapse of soil by use of mats, barricades, restricting the location of equipment, or shoring, etc.
3) Using power / machine excavation in areas where underground electrical system exists not allowed.

d) Permit receiver is responsible to ensure:
1) Gas and oxygen tests was performed prior starting the activity.
2) Provide a ladder or stairway for safe entrance and exit in accordance with Working at Height procedure (YAN-OMS-316.09).
3) Provide adequate shoring or sloping of the trench wall, if the depth exceeds 1.2 meters.
4) Provide adequate arrangements to dewater the ground water.
5) Use confined space entry permit for excavation more than 1.2 meters deep.

e) Do not place excavated materials or mechanical equipment within 1 meter of the edge of any excavation. Also, keep equipment and other heavy objects at least 2 meters from the edge of the excavation. Provide sheet piling, shoring, and bracing for excavations in excess of 1.2 meters, or when it is necessary to operate heavy equipment nearer than 2 meters to the edge.
1) Protective Support System: A means of protecting employees from cave-ins. Protective systems include support systems (shoring), sloping and shield systems (trench boxes) and other systems that provide the necessary protection.
2) When excavations are 1.2 meters (4 feet) or deeper, all walls and faces of trenches/ excavations shall be sloped, shored, or trench boxes installed prior to allowing personnel to enter the trench/excavation.
3) Protective system options include proper sloping of the sides of the excavation. Supporting the sides of the excavation with timber shoring or aluminum hydraulic shoring, or placing a shield between the sides of the excavation and the work area.
4) Protective systems shall have the capacity to resist without failure all loads that are intend or could reasonably be expected to be applied or transmitted to the system.

f) Hand tool excavation shall be used in the presence of any exposed underground services.

g) Do not cut red concrete as the red color concrete is used to mark underground electrical systems.

h) Do not use mechanical excavation within 1 meter of any underground services.

i) Carry gas test prior to start of each day or shift any excavation. The permit issuer may, if the conditions warrant, require more frequent testing or continuous monitoring.

j) Provide ladders or other suitable means of access / egress to excavations at a maximum spacing of 30 meters on the perimeter of open excavations and 7.5 meters for trench excavations greater than 1.2 meters in depth.

k) Barricades shall be placed around all excavations and flashing lights shall be installed at night if the excavation is not in a well-lit area.

l) Provide adequate support for all exposed cables and pipes.

m) Do not leave excavations, regardless of their depth, unattended without taking steps to prevent someone from inadvertently tripping, falling or driving in it.

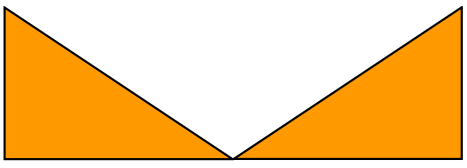
n) Work permit receiver is responsible for providing walkways or bridges with standard handrails where employees or equipment are required or permitted to cross over excavations.

o) Shoring and / or Sloping:

1) Sloping: This is a method of protection from cave-ins by excavating to form sides that are inclined away from the excavation to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions of exposure and application of surcharge loads.

2) Support System: A structure such as underpinning, bracing, or shoring which provides support to an adjacent structure, underground installation or the sides of excavation.

3) All sloping shall be sloped at an angle not steeper than 1.5:1 or 34° [1.5 meters (5 feet) horizontal to 1 meter (3 feet) vertical] this would be for all excavations of less than 6 meters (20 feet) deep.

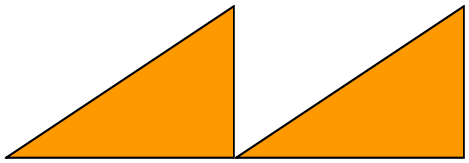


1.5: 1 Ratio

4) The walls and faces must be sloped to their angle of repose or shoring installed where employees are exposed to walls and faces of excavations and trenches 1.2 meters or more in depth.

5) Ensure the slope of the angle greater than 45 degrees when shoring is not installed. Flatten the slope when material such as silt or sand is encountered or when erosion or slide planes appear.

6) Bracing and shoring of trenches must be carried down and along with the hand excavation. Install Shoring prior to personnel entering a machine-excavated trench.



1.5: 1 Ratio

7) An easy and safe means of exit shall be provided if the excavation is 1.2 meters (4 feet) deep or greater. This exit shall be within 7.5 meters (25 feet) of every worker.

8) If a ladder is used as an exit, the ladder shall be secured and extend 1 meter (3 feet) above the landing. (No step ladders can be used; all exit ladders shall be straight ladders)

p) Excavation shall be inspected periodically for presence of groundwater, change in soil condition and effects of weather such as rain or wind. Safe means of continuing the work shall be established as any condition changes.

q) Work permit issuer & receiver are responsible to inspect excavations on daily basis & stop all work in the excavation until the necessary precautions have been taken to safeguard the employees, if evidence of possible cave-ins or slides is apparent.

r) Suspend excavation work if any unusual conditions are found or unidentified or unexpected pipe, cable, concrete or other obstructions are uncovered or permit conditions are not implemented. Subject Matter expert (civil, Mechanical, electrical engineer) shall verify condition

s) On completion of excavation work: Compact backfilled excavations to substantiate load-bearing capability of the surrounding area before the barricades are removed.

4.3.3.3 Lifting Plan

An assessment by a competent person(s) (Certified Riggers) of the factors affecting the safety of a proposed lift and the controls necessary to manage it using YAN-OMS-310.10 K.

This Plan is required for all types of lifting using crane (Fixed/Mobile). Crane is a machine which is capable of lifting, lowering and moving of heavy materials with the use of pulleys and cables. Other Manual lifting, forklift, and aerial lifts include man lift, scissor lift are exempted from lifting Plan and shall follow Lifting Equipment procedure (YAN-OMS-316.06) and MOC procedure (YAN-OMS-317).

a) Definitions

1. Non-Critical Lift
   A Non-Critical Lift involves lower risk, simple lifting operations to which none of the Complex items applies to the lift.
2. Critical Lift
   A Critical lift which requires a higher level of experience, qualification, and/or certification in order to plan and/or execute than a non- Critical Lift.
   Note: (referring to Lifting Equipment procedure: YAN-OMS-316.06 "Lifting Classification Matrix" for Non-Critical/Critical Lift details)
3. Competent Person for Rigging
   A person who, through past experience, training or qualification, has demonstrated capability in performing a particular task and has been certified for this. There are various levels of what is deemed competent for different aspects of lifting from simple lifts or basic rigging to operating different types of cranes (fixed/mobile) up to performing complex lifts. The required level of competency of the person(s) depends on the complexity and hazards of the lift. (Referring to Lifting Equipment procedure YAN-OMS-316.06).
4. Lifting Equipment/Tools
   Mechanical or manual lifting device used to perform lifting operations (Crane, winch, pulley, Chain block, etc.) and auxiliary equipment used in direct association of lifting operations, e.g. to secure a load (i.e. chains, slings, spreader beams and all other lifting tackles).
5. Rated Capacity (Safe Loading Load)
   The maximum mass (in kg or tons (or local unit of measurement as applicable)) which may be handled by a crane at a specific working radius (in meters (or local unit of measurement as applicable) and a specific boom or jib length without the strength or stability requirements being exceeded. The rated capacity shall comprise the following mass of the total lifted load and mass of the hook block in use.
6. Safe Working Load (SWL)
   The maximum load, determined by an approved certified rigger that an item of Lifting Equipment might raise, lower or suspend under particular service conditions also in line with Manufacturer specifications.
7. Working Load Limit (WLL)
   The maximum load that the lifting equipment is designed to raise, lower or suspend under ideal conditions (the Safe Working Load will usually be the same as the Working Load Limit — but can be less).

b) Persons involved in lifting activities shall be trained, qualified, certified and authorized as per Lifting Equipment procedure YAN-OMS-316.06 requirements.

Note: Referring to Lifting Equipment procedure YAN-OMS-316.06 "Lifting Plan General Guidelines" for Lifting Plan assessment requirements and details.

4.3.3.4 Gas Testing

a) Gas Tester: Shall be nominated by his sponsoring department Sr. Manager for training and certified by EHSS Department and meets the requirements to conduct gas test. Gas test results shall be recorded in the work permit space as per the frequency specified by the issuer in the work permit.

b) Conduct gas test to ensure that:
   1. Flammable conditions do not exist
   2. Employees are not exposed to harmful concentrations of toxic substances or oxygen deficient atmospheres.
   3. The gas testing shall be conducted just before issuing the work permit.

c) Combustible gas detector instruments shall be used only in atmospheres containing oxygen range between 19.5%~21% as these instruments shall not measure the flammable concentration accurately in oxygen deficient or oxygen rich atmospheres.

d) Non-combustible type (e.g., infrared type) gas meters or meters designed to measure flammable concentration of gas in oxygen deficient atmospheres will be used to measure the presence of flammable material in confined spaces / piping that is purged with Nitrogen or other inert material.

e) Use chemical reaction tubes, such as Dragger tubes, or other such instruments to check concentration of toxic or corrosive substances.

f) Maintain gas detectors in good condition (by periodic calibration of sensors and preventive maintenance recommended by vendor) because instruments can provide ignition sources for flammable mixtures. Do not use combustible gas detectors with damaged flame arrestor or without flame arrestor.

g) Prior to issue of work permit, permit issuer shall establish the need for gas testing based on the type of the work and hazards in the area. Some of the work activities that required gas test are given below:
   1. Test for flammable mixtures to be performed in an area where hot work to be performed.
   2. Perform toxic or corrosive substances tests when their presence is possible.
   3. Confined space entry activity
   4. Perform toxic or corrosive substances, flammable mixture and oxygen deficiency tests for confined space entry when their presence is possible. The test shall be conducted with purge and ventilation equipment stopped.
   5. Establish periodic gas test frequency prior to issue of the work permit.

6. Gas testing for flammable vapors shall be performed.

h) Whenever issuer request to or has doubt conduct gas testing to assist operations personnel with various steps of equipment preparation. Such tests assist in purging and washing. These tests are considered preliminary and will be revalidated prior to issue of a work permit and releasing the equipment to the work crew.

i) Trained personnel authorized by department Sr. manager and certified by EHSS Department will only use gas detectors and chemical reaction tubes to perform a gas test.

j) Check the gas detectors are functioning as required for operability prior to use every time.

k) Permit Issuer shall specify repeat gas tests at defined intervals or continuous monitoring in the Hot Work Permit for the locations or conditions where there is a greater likelihood of gas release.

l) Specify continuous gas-testing throughout the course of the work or at specified intervals in some instances such as hot work or confine space where conditions could change, or tank cleaning when the work may cause a change in condition through sludge agitation or other by products appearing.

m) Gas tester must follow below points for performing a gas test:
   1. Understand specific equipment involved and the gas tests.
   2. Understand LEL, UEL & oxygen deficiency.
   3. Verify proper functioning of instrument.
   4. Use correct chemical reaction tube / instrument to do toxic substances test.

n) Procedure for Conducting Gas Test:
   1. Open Areas
      - The primary concern in open areas is flammable gas. However, conduct gas tests for toxic substances if their presence is suspected.
      - Check around, at and near all openings of the equipment where the work is to be done.
      - Conduct gas test at sewer openings, open vents, bleeders and at any other possible locations in the area where leaks may be suspected.
   2. Confined Spaces

      The gas tester shall not enter the confined space for testing purposes unless the results across the cross section (top, middle and bottom sections) indicate that the oxygen level range between 19.5%~21%.
      - Entrance into a confined space is not allowed if the oxygen level is below 19.5% or above 21%. Oxygen content above 23% can cause explosions or vigorous burning of flammable materials, including hair and/or clothing.

- If entry is required for testing purpose, gas tester shall be wear Self Contained Breathing Apparatus (SCBA) or supplied air respirator and with a standby man outside the confined space.
- Test cross section (top, middle and bottom sections) of the internal atmosphere of the confined space with a calibrated direct-reading instrument, before an employee enters the confined space, as per the following conditions in the order given:
  - Stop ventilation / purging at least 15 minutes, or based on risk assessment, prior to conducting the gas tests, to allow gas concentration to equalize.
  - Conduct oxygen test prior to entering a confined space or vessel.
  - Ascertain nature of other gases when oxygen percentage is less than 19.5%. If it is inert gas, then the oxygen content shall be raised by purging with air.
  - Perform gas tests throughout large spaces such as tanks, drums, towers or excavations where it may be possible for gas to be trapped in dead ends of nozzles, plugged down-comers, structural members, etc.
  - Perform gas tests at multiple levels in tall vessels since some gases are heavier than air and tend to settle at the bottom and some which are lighter, will rise to the top.
  - Conduct gas test considering the task to be carried out. If gas test for all of the below mentioned is required, then it will be carried out in the order specified:
    - Oxygen
    - Flammable gases and vapors
    - Potential toxic substances
    - Record initial/periodic gas tests results on work permit.
    - When the gas detector indicates more than 0% of ell of flammable gas in any confined space, personnel shall immediately come out
    - Stop hot work activities inside confined space if the flammable gas concentration exceeds 0% of LEL.
    - Use continuous monitoring instrumentation with alarms (such as gas detector) that meets proper electrical classification when specified in the permit.
    - At least one person in each confined space entry shall have a calibrated pocket sized oxygen meter with alarm.
  - Test of Flammable Gases:

- Authorized gas tester shall carry LEL test before any hot work permit is issued for any location where there is a possibility of flammables being present. The test shall be carried out no more than 2 hours prior to the issue of the permit. A fresh gas test shall be carried out before recommencing work in the event that the job is stopped for more than half of the retest frequency recommended in the permit or if re-test frequency is not mentioned then if two hours or more passes between the test and the re-start of the work.
- Permit Issuer shall specify repeated gas tests at defined intervals or continuous monitoring in the Work Permit for the locations or conditions where there is a greater likelihood of gas release. The standard gas tests every 2 hours. But the issuer can specify gas test <2hrs (e.g. every 1 hour)
- Measure the concentration of flammable / combustible vapors in the sampled area as percent of lower flammable limit in air.
- If gas detector indicates more than 0% of the LEL, hot work shall not be carried out. If further efforts for purging fails to remove all traces of flammable gas, the permit issuer shall authorize the hot work to proceed only if the following conditions are met:
  - The source of the flammable material is identified
  - A determination is made that the concentration cannot exceed 0.5 % of the LEL.
  - Gas detector gives a % LEL of the gas in air. There may be cases where a nitrogen or inert gas purge has been used and it is necessary to confirm that all the flammable gas has been removed. In such cases, a special gas detector or testing procedure (such as gas chromatography analysis) shall be required that will indicate the % of flammable gas, if any, left in the inert.
  - Confined space entry is not allowed if the gas test reading is more than 0 % of the LEL.
- Test of Toxic Substances:
  - Confined space entry and work in an atmosphere containing toxic gas or vapor in a concentration above the zero PPM shall not be allowed.
  - Follow specific written instructions, supplied with each container of toxic vapor / gas test tubes that contains limitations of the

tube performance, possible interference by chemicals and an expiration date for that batch of tubes.

- Use correct chemical reaction tube / instrument when tests for toxic substances are carried.
- Carry gas test as close as possible to the time that work in the tested area begins for realistic assessment of toxic substances.

- Guidelines for carrying Periodic Gas Test:
  - Specify continuous gas-testing throughout the course of the work or at specified intervals in some instances such as hot work or confine space where conditions could change, or tank cleaning when the work may cause a change in condition through sludge agitation or other by products appearing.
  - Write name or signature of the person conducting the gas test, test results, date and time of the test on the work permit.
- Gas Testing Equipment Reliability:
  - Authorized gas testers shall be trained on gas detectors proper use, care, inspection, testing requirements and limitations of the detectors.
  - Before using any gas tester check calibration validity sticker affixed on the gas tester by certified agency.
  - The authorized gas tester in each department shall conduct the function test on daily basis.
  - Certified agency shall be carry out a quarterly calibration, maintenance and repair of gas detectors and relevant documents such as calibration certificate and details of repair / maintenance are kept by concerned focal point.
  - Listing all Gas detectors by respective department for monitoring and tracking
  - Tag all gas detectors that are not working properly (or out of calibration) and sent them for repair.
  - Custodian shall ensure gas detectors are checked on weekly basis by certified gas tester and record the details of checks in a logbook in the format Weekly Check List for Gas Detectors (Appendix YAN-OMS-316.10M).
  - An external, independent vendor or his representative will do calibration on a quarterly basis to ensure correct performance of the unit. Preventative maintenance will also be carried out at this time.

- This external independent check shall be done on or before the expiry date mentioned on latest calibration tag / sticker. If due to any reason, calibration is delayed DO NOT use the gas detector until calibration is done and new tag / sticker is affixed.
- Tag and dispatch for repair any gas detector that fails to recharge satisfactorily or calibrate through normal adjustment.
- Create tag number for new gas detectors and include tag number, manufacturer serial number and custodian details in gas detectors register format as per Weekly Check List for Gas Detectors Appendix YAN-OMS-316.10M). Take out any damaged or inoperative gas detector from service and send it for repair.
- Keep gas detectors instruction manuals with each custodian for reference.

4.4 Work Permits

Work permits are used to perform any activities by non-operations personnel. The Work Permit shall be issued by an authorized “permit issuer” of the area where work is to be performed. The following types of work activities shall have a work permits:

4.4.1	General Work Permit	YAN-OMS-316.10 A
4.4.2	Hot Work Permit	YAN-OMS-316.10 B
4.4.3	Electrical Work Permit	YAN-OMS-316.10 C
4.4.4	Confined Space Entry Permit	YAN-OMS-316.10 D
4.4.5	Excavation Work Permit	YAN-OMS-316.10 E
4.4.6	Radiation Work Permit	YAN-OMS-316.10 F
4.4.7	Lifting Work Permit	YAN-OMS-316.10 G
4.4.8	High Pressure Jetting Work Permit	YAN-OMS-316.10 H

4.5 General Work Permit

Written authorization to perform non-operations activity that does not create enough heat or sparks to ignite flammable gas-air mixtures or flammable materials. In classified / non-classified areas, General work will primarily be done with hand-held, hand operated tools, which do not normally produce sparks and work not in electrical hazardous classification area. General work permit may also require gas test.

A General Work Permit (YAN-OMS-316.10 A) shall be required for all such activities. Some examples are:

4.5.1 Vehicle Entry in non-hydro carbon area/common area.

4.5.2 Work at height activity.

4.5.3 Flange tightening, gland packaging & gasket tightening activities.

4.5.4 Installing & removal of blind activities.

4.5.5 Adjusting & repairing of instruments
4.5.6 Plant Area cleaning and housekeeping activities (not part of Operational activities)
4.5.7 Visual monitoring - Any machinery or instrument monitoring such as vibration or noise testing.
4.5.8 Plumbing work
4.5.9 Changing Lamps in buildings.

4.6 Hot Work Permit

Written authorization to perform operations activity capable of supplying ignition energy for igniting flammable mixtures or combustible materials that may be released to create a potential fire or explosion hazard using Hot Work Permit (YAN-OMS-316.10 B).

Work requiring a Hot Work Permit is hot work in combination with any of the Factors below:

4.6.1 The actual or potential exposure to sources of ignition in the following locations:
- 4.6.1.1 Any area that has Hazardous Area Classification for Flammable Gases and Vapors.
- 4.6.1.2 Any area that is proximity of any combustible/flammable materials (including dusts).
- 4.6.1.3 Any area within proximity of potential flammable and combustible material release points (flanged and/or threaded piping connections, instrumentation bleeds, separators, tanks, dehydrators, pig traps, regulators, meters, compressor stations, transfer pumps, and other equipment).
- 4.6.1.4 Any area where combustible / flammable material whilst not in immediate proximity, are readily ignitable and/or where situated near adjacent wall or floor openings.
- 4.6.1.5 Any area where combustible / flammable materials are adjacent to the opposite side of metal partitions, walls, ceiling, or roofs and have the potential to be ignited by heat conduction or radiation.
- 4.6.1.6 Vehicle Entry in hydrocarbon area or potential hydrocarbon existence.

4.6.2 The following Activities (but not limited to) shall be covered under Hot Work Permit scope:
- 4.6.2.1 Gas/flame cutting, grinding, welding, brazing, soldering etc.
- 4.6.2.2 Using heat or flame for any activity, etc.
- 4.6.2.3 Operation of internal combustion engines in classified areas.
- 4.6.2.4 Any release of flammable gases materials.
- 4.6.2.5 Use of any sparks-producing machine or devices such as drills, grinders, etc. or flash photography inside the plant or hydrocarbon area.
- 4.6.2.6 Hot tapping activity.

4.6.3 Hot Work Control

Isolate combustibles and flammables that cannot be relocated from ignition sources by flame-proofed covers or otherwise shielded with metal or fire-resistant guards or curtains.

4.6.3.1 Fire Watch Responsibility.

Fire Watch shall be an employee (direct hire (ERT Members)/or Short/Long Term contractor employee certified by Third party agency) who is trained and certified by EHSS

department authorized by his Department Sr. Manager. Fire watch is responsible and authorized to immediately stop the hot work if hazardous conditions arise. His role includes:

a) Monitor flammable and combustibles, spark containment and for any abnormal event.
b) Being familiar with the area and potential hazards and knowing how to obtain assistance in an emergency.
c) Stop the hot work if a fire (or unsafe situation) is observed, inform operations supervisor and initiate appropriate.
d) Monitors the hot work area for changing conditions and watches for fires, and extinguishes them if possible.
e) Ensure that the area is covered with fire blanket and all openings in nearby area to control sparks and slags.
f) Whenever fire watch leave the activity area, the job shall be stopped or endorse to another qualified fire watch.
g) Fire watch shall stay at hot work location at least 30 min. after completion of the work and/or Where there is any possibility fires, maintaining area during lunch, all breaks, and for at least one-half hour after completion of the hot work activity.

4.6.4 Welding, Cutting and other Mechanical hot activities:

4.6.4.1 Permit receiver shall deploy qualified welders only. For a particular type of welding job, welder qualification, experience and competency shall be verified by concerned department and recorded in Welding Job Checklist (Appendix YAN-OMS-316.10 R).

4.6.4.2 Ensure to relocate all moveable fire hazards in the vicinity at least 15 meters from the hot work site.

4.6.4.3 Provide adequate ventilation (natural, mechanical, or respirator) for all welding, cutting, brazing and related activities to ensure permissible exposure levels are not exceeded.

4.6.4.4 Provide local exhaust ventilation, Self-Contained Breathing Apparatus (SCBA) or an airline respirator when welding, heating or burning galvanized or cadmium-plated metal.

4.6.4.5 Permit receiver must fill the Welding Job Checklist (Appendix YAN-OMS-316.10 R) and submit it at the time of receiving permit.

4.6.4.6 PPE and clothing requirements for cutter, welder and welder's helper shall be in accordance with PPE procedure (YAN-OMS-316.08).

4.6.5 Usage of Oxygen (O2):

4.6.5.1 Use Oxygen only for intended purpose.

4.6.5.2 Do not use Oxygen for the following cases:

4.6.5.3 As a substitute for compressed air.

4.6.5.4 In pneumatic tools, in oil preheating burners, to start internal combustion engines, to blow out pipelines, to dust clothing or work, or to create pressure for ventilation.

4.6.5.5 To strike an oily surface, clean greasy clothing, or added to fuel oil or other storage tanks.

4.6.6 Usage of Torch:

4.6.6.1 Check torch connections for gas tightness after assembly and before lighting.

4.6.6.2 Use soapy water or equivalent to check leakages. Do not use open flame to find out leakages.

4.6.6.3 Purge hoses individually, before lighting the torch for the first time each day.

4.6.6.4 Hoses shall not be purged into confined spaces or near ignition sources.

4.6.6.5 Use friction lighters for ignition. Do not use matches, cigarette lighters or hot metals for lighting torches.

4.6.6.6 Follow manufacturer's recommendations with respect to the sequence of operations in lighting, adjusting, and extinguishing torch flames.

4.6.6.7 Comply with cylinders, hoses and accessories specifications, handling & storage requirements in accordance with Material Handling & Storage procedure (YAN-OMS-316.03). Communicate with welders to take appropriate actions of closing the cylinder's valves in case of any leakages, fires and/or when not in use from the cylinder valves / regulators.

4.6.7 Electric Current

4.6.7.1 Ratings shall be adequate to handle the job.

4.6.7.2 Welding machines shall not be operated above the electric current ratings and corresponding rated duty cycles as specified by the manufacturer, and are not to be used for application other than those specified by the manufacturer.

4.6.7.3 For safety during welding, the Negative terminal of welding machine must be connected as close as possible to the work piece. This ensures that the return current flows back to the machine through shortest path and hence prevents overheating and sparking in that area.

4.6.7.4 Chains, wire ropes, and hoists shall not be used to carry welding current.

4.6.7.5 Welding current shall be returned to the welding machine by a single cable extending from the work to the welding machine.

4.6.8 Welding Cable

4.6.8.1 Welding Cable shall be of the flexible type designed especially for welding service and of a size adequate for expected current and duty cycles.

4.6.8.2 Coiled welding cable shall be spread before use to avoid overheating and damage to insulation.

4.6.8.3 The welding machine operator shall inspect welding cable for wear or damage before each use and Maintenance Department, and shall inspect every six months for wear or damage of welding cable.

4.6.8.4 Welding cable shall be of a size suitable for the current rating of the welding machine.

4.6.9 Grounding

4.6.9.1 The work piece of metal to be welded shall be grounded.

4.6.9.2 The work lead shall not be used as the grounding lead.

4.6.9.3 All fixed welding machines shall be grounded. The welder shall verify all grounds.

4.6.9.4 Grounding may be accomplished by locating the work on a grounded metal floor, plate, or by connection to a grounded building frame or by connecting through the grounding of the welding machine.

4.6.10 Electrode Holder

4.6.10.1 When welding is interrupt for about half an hour, the electrode holder shall be de-energized by turning off the machine.

4.6.10.2 When not in use, electrodes shall be removed from holders and placed so they cannot make contact with persons, conducting objects, flammable liquids, or compressed gas cylinders.

4.6.10.3 When the machine is to be moved outside its radius, the input power supply to the equipment shall be electrically disconnected.

4.6.10.4 Electrode holders shall be insulated and kept in good condition.

4.6.10.5 Damaged holders shall be discarded.

4.6.10.6 Electrode holders shall not be cooled by immersion in water.

Note: Permit issuer to ensure each worker permit receiver takes-out his lock from LOTO (if installed) after closeout of hot work permit.

4.6.11 Hot Tapping

A procedure used in the repair, maintenance and services activities, which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

4.6.11.1 Use Hot-Tapping option only where it is impractical to take the equipment out of service. In order for this work to be, accomplished safely, proper precautions must be taken and proper work procedures are developed and followed.

4.6.11.2 Follow guidelines given in Guidelines for Equipment Preparation for Maintenance (Appendix YAN-OMS-316.10Q).

4.6.11.3 Conduct formal JLA as per YAN-OMS-311.02, implement recommendations and Management of Change (MOC) review and approval process.

4.6.11.4 Fill Hot Tapping Data Sheet (Appendix YAN-OMS-316.10N)

4.7 Electrical Work Permit

Work on, with or proximity of live electrical installation such as testing and measurement, repairing, replacing, modifying, extending, erecting, maintaining and inspecting using Electrical Work Permit (Appendix YAN-OMS-316.10 C).

The Electrical Work Permit is to, Safeguard authorized personal working in order to prevent unexpected power isolation affecting the normal operation of the plant and prevent unexpected incidents during restoration of power also while Isolation and Restoration of Transformer Feeders, Switchgears, Motors and Transfer of Automatic Transfer Switches or other Electrical Equipment.

This section provides additional requirements for Electrical Work Permits to cover the related electrical risks in support of a Hazardous Assessment and control Form.

Additional information relating to Electrical Safety can be found in Electrical Safety procedure (YAN-OMS-316.05) as well as in SABIC Manufacturing Standard (SMS) ED003 (Electrical Authorization Levels).

4.7.1 Work requiring an Electrical Work Permit is electrical work in combination with any of the factors below:

- 4.7.1.1 Working near electrical system(s): Working close enough to expose the worker to any electrical hazard according to ARC flash study (refer to Electrical Safety procedure: YAN-OMS-316.05).
- 4.7.1.2 Working on energized electrical system(s): Intentional contact with energized circuit parts or conductors (or entry within the prohibited approach boundary) with the purpose of installing, modifying and/or repairing equipment.
- 4.7.1.3 All rack-out/in with Electrical Work Permit.
- 4.7.1.4 Work on/ with an electrical installation such as testing and measurement, repairing, replacing, modifying, extending, erecting, maintaining and inspecting.

4.7.2 Electrical work activities shall be controlled through an Electrical Work Permit which is complimentary to Hazardous Assessment and control Form. The only deviation permitted from this requirement is to be made through an approved and authorized risk based process.

4.7.3 Electrical equipment and wiring shall meet the requirement of the hazardous area classification in accordance with the applicable standards/ regulation, such as NEC, IEC 79, EN50, API RP 540, etc.

4.7.4 Use only certified components or enclosures in hazardous areas. Class group and area classification shall be marked on the equipment and to be used in accordance with area classification.

4.7.5 Electrical safety equipment (i.e., gloves, sleeves, blankets, hot sticks) shall be used and inspected prior to each use as per Electrical Safety procedure (YAN-OMS-316.05).

4.7.6 Once the job is initiated, review of the job execution shall be carried out. Then each step shall be carefully identified with help of relevant SOP/SMP.

4.7.7 Approval shall be taken from the relevant authority before execution of the job.

4.7.8 The decision on the requirement for a higher-level formal Job Loss Analysis (JLA) as per (YAN-OMS-311.02) shall be responsibility of the assigned Electrical work permit issuer together with the authorized high voltage person.

4.7.9 Competent Electrical Person CEP (Work Permit Receiver)

A person authorized by the Electrical Installation Responsible Person (EIRP) with the necessary competence (training experience and knowledge) to recognize and avoid danger. Responsible for safe working at the work site as per YAN-OMS-316.05.

4.7.10 Electrical Work

Work on, with or near an electrical installation such as testing and measurement, repairing, replacing, modifying, extending, erecting, maintaining and inspecting.

4.7.11 Grounded

Free from any electrical connection to a source of potential difference and from electrical charge; not having a potential different from that of the earth.

4.7.12 High Voltage

Line voltage: higher than 1000VAC, phase ground higher than 1500VDC.

Note: Additional information on specific definitions above and other definitions relating to Electrical Safety can be found in Electrical Safety procedure (YAN-OMS-316.05) as well as in SABIC Manufacturing Standard (SMS) ED003 (Electrical Authorization Levels).

4.7.13 Working on De-Energized Electrical Equipment

4.7.13.1 Confirmation of the details of the work to be carried out.

4.7.13.2 Confirmation of the exact equipment which has been made dead and its precise location.

4.7.13.3 The LOTO process shall form the basis of the isolation requirements.

4.7.13.4 Confirmation that the equipment is isolated from all sources of electrical energy.

4.7.13.5 Confirmation of the points of electrical isolation/disconnection.

4.7.13.6 Confirmation that all points of electrical isolation have been secured by the use of locks and tags.

4.7.13.7 Confirmation that the electrical equipment has been proved dead with an approved voltage indicator at the point of work.

4.7.13.8 Confirmation of the named competent person responsible for the work who will be present for the duration of the work.

4.7.13.9 Confirmation of the PPE requirements specific to any electrical work.

4.7.13.10 Confirmation that the conditions and limits specified in the Electrical Work Permit and additional permits have been communicated by the receiver and are understood by the assigned work team and all others involved with the task.

4.7.13.11 Confirmation of the points where the conductors are earthed (grounded) including any earths/grounds attached adjacent to the work.

4.7.13.12 Confirmation that the earths/grounds cannot be removed without the use of a tool or key and authorization by the Permit issuer.

4.7.13.13 Confirmation of the points where warning notices have been placed to indicate adjacent live equipment.

4.7.14 Working on energized electrical system(s)

4.7.14.1 Confirmation that it is unreasonable for the equipment to be dead.

4.7.14.2 Confirmation that the persons performing the work are trained and competent to avoid danger during their work on an energized electrical system.

4.7.14.3 Confirmation that suitable precautions including tools, equipment and PPE are in place.

4.7.14.4 Confirmation of controls to prevent access to energized parts.

4.7.14.5 Confirmation that an additional electrical authorized and competent person is present whose sole task is to make sure that all necessary safety aspects shall be addressed during the work on energized electrical systems.

4.7.14.6 Confirmation that suitable PPE is available for personal protection from arc flash where appropriate.

4.7.14.7 Working on energized electrical system shall be performed according to Electrical Safety procedure (YAN-OMS-316.05) (voltage level guidelines).

4.8 Confined Space Entry Permit

This unit shall set up the minimum requirements for Confined Space Entry Permit to protect personnel from hazards such as oxygen deficiency, toxic materials, flammable substances and energy or movable parts of power-driven equipment when working in confined spaces as well as rescue requirements using Confined Space Entry Work Permit (YAN-OMS-316.10D).

Confined Space is any enclosure space (though not always entirely) having a limited opening for entry and exit; presents serious hazards to occupants; or which is not intended for continuous employee occupancy. The space is large enough and configured to allow entry (including partial entry) of a person (s) for the performance of an assigned task. Confined spaces include, but are not limited to, storage tanks, process vessels, ventilation and exhaust ducts, manholes, pits, and excavations more than 1.2 meters in depth.

To stay in tune with new opportunities of controlling Confined Space Entry, Camera Controlled processes are being used nowadays. This process includes a number of aspects such as camera control inside and at the Confined Space Entrance(s), direct communication via intercom system and continuous monitoring of the Confined Space conditions. In a centralized control room multiple Confined Spaces can be monitored by one or more Safety persons. Risk assessment is mandated to capture all relevant aspects (eg. continuous entry control, number of Entry/Manhole Attendants and their availability in a specified area, availability and deployment of a rescue team, registration of entrants, alarming method, ….) The Site needs to document the details and outcome of the risk assessment and needs to decide whether this creates an adequate level of Safety for the entrants before this method is used.

4.8.1 A permit required confined space is a confined space in combination when any of the factors below are in place:

4.8.1.1 The atmosphere is or could become hazardous, either because of its normal contents or because of the nature of the work to be done.

4.8.1.2 The walls are inwardly converging such that an entrant could be trapped or asphyxiated by the internal configuration.

4.8.2 Specific terms used in this procedure;

4.8.2.1 Atmosphere

Environment within the confined space that may expose the entrants to risk of death or injury due to presence of flammable or toxic materials, or oxygen deficiency.

4.8.2.2 LEL (Lower Explosive Limit)

The lowest concentration at which a flammable substance can catch fire upon contact with an ignition source. The LEL shall be Zero (0%) for any entry into Confined Space at all.

4.8.2.3 Breathing Air Apparatus

a) Self-Contained
b) A positive pressure respirator in which the supply of air is carried by the wearer In Line through portable pressurized cylinder.
c) A positive pressure respirator on which air is made available to the wearer via a hose connected to a remote, and dedicated breathing air supply.

4.8.2.4 Standby Man (Entry Attendant)

Standby Man Shall be direct hire or Short/Long Term contractor employee who is trained/qualified, certified and interviewed by EHSS Department, authorized by his sponsoring Department Sr. Manager and to monitor the entry site and seek emergency assistance to ensure the safety of personnel present within the confined space.

4.8.2.5 Rescue Plan

A Rescue Plan (YAN-OMS-316.10K) that is used to rescue the persons from the Confined Space in case of Emergency. Rescue plan shall be approved and all actions shall be taken prior to work permit. Rescue Plan shall be prepared followed by the formal Job Loss Analysis (JLA) and shall be approved by all concerned prior to initial entry.

4.8.3 General Guidelines for Confined Space Entry Permit

4.8.3.1 Respective area owner shall identify all Confined Spaces by posting signs stating “DANGER – CONFINED SPACE – ENTER BY PERMIT ONLY” at entry points in case of entry.

4.8.3.2 Area Owner shall establish a master list of all confined space in their area by a team consists of Operation, EHSS engineer, support maintenance team, technical discipline if required and to be approved by Concern Owner Sr. Manager.

4.8.3.3 Only one Confined space entry permit shall be issued for entry to specific confined space and shall governor the other groups entering the confined space to execute their activities.

4.8.3.4 Blind list with process equipment to be attached to the LOTO.

4.8.3.5 Marked P & ID’s

4.8.3.6 Rescue plan (YAN-OMS-316.10K) in case if confined space.

4.8.3.7 Once a Rescue team is deployed to perform a Confined Space rescue all Confined Space Entries on site that depend on that same Rescue team shall stop their activities until the Rescue team is fully available again for rescue.

4.8.3.8 Confined Space Ventilation plan (YAN-OMS-316.10W)

4.8.3.9 For Excavation jobs, there may be some situations when Ventilation plan and Electrical lay out plan is not applicable due to wide-open areas and not being used any electrical equipment(s) in excavation. In such cases, ventilation and electrical hazards to be discussed thoroughly in Formal JLA as per YAN-OMS-311.02 (if any) by the team and ventilation and electrical lay out plan may be not required.

4.8.3.10 Standby Man shall be mandatory for all confined space entry permits. No Confined Space Entry shall be allowed without Standby Man.

4.8.3.11 Shall assign one standby man for each confined space entrance whenever having multiple selected entry points.

4.8.3.12 Permit issuer shall ensure that Confined Space Entry Permit is obtained before entry is authorized.

4.8.3.13 As issuer only Supervisors/ assigned supervisor and above are authorized to issue and as receiver Supervisor-direct hire, long term Contractor & SM for the Confined Space Entry Permit and all work permit types inside after joint visit.

4.8.3.14 Permit issuer shall suspend the Confined Space Entry Permit when a condition is not met the requirement of the Confined Space Entry Permit.

4.8.3.15 Permit issuer shall ensure atmosphere within the confined space is tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of hazardous gases.

4.8.3.16 In case entry is not perform inside the confined space within half hour after Confined Space permit issued, the confined space work permit shall be considered as suspended and need to do the gas test and reconfirm all requirements again before entering the confined space permit.

4.8.3.17 The default maximum frequency for gas test inside the confined space is every 2 hours. In case of continuous gas test requirement, this frequency (logging in Gas Test Log sheet in task related work permit) shall not exceed one hour recording.

4.8.3.18 DO NOT assign Standby Man and Fire watch with any other duties while acting in the capacity of Standby Man & Fire Watch and allow leaving their post while workers are still inside.

4.8.3.19 Display confined space entry permit at the job site or confined space entry point to allow entrants to confirm that permit entry requirements are in place.

4.8.3.20 In case of radiation activity inside confined spaces, The RSO shall not allow any entrants including stand by Man to enter the barricaded area except radiographers. The Radiographers can be trained as Stand by man to do stand by man roles inside barricaded area as well as his roles for radiography purposes.

4.8.3.21 The confined space does not contain sludge or deposit of hazardous material likely to give off harmful fumes, when disturbed. (e.g., Hydrocarbon pockets in polymer chunk inside a reactor dealt with great care).

4.8.3.22 The pressure requirement and supply volume of air shall match the equipment specification to achieve the desired ventilation. It is recommended that a particle strainer be in-stalled to prevent blockage of the small orifices in the air movers/ fan. Only explosion proof electric fans/air movers shall be used to ventilate confined spaces that may contain flammable gases or dust. The use of nitrogen or any other compressed gas (e.g. oxygen) to operate an appropriate type air mover/ventilate confined space is prohibited.

4.8.3.23 Care shall be taken to ensure that contaminants are not drawn into the Confined Space from external sources, such as internal combustion engines, sewer drains, process vents, or hot work activities located close to open man ways. Ventilation arrangements shall not interfere with the entry and exit of personnel.

4.8.3.24 Only explosion proof electric fans/air movers shall be used to ventilate confined spaces that may contain flammable gases or dust. Fans and air movers must be electrically bonded to the vessel/ grounded to prevent the accumulation and discharge of static electricity.

4.8.3.25 Ventilation of vessel showing only the bottom manway open this ensures that the whole vessel is ventilate. If the Middle or top Man way is opened the air flow will short circuit and there may be hydrocarbons in the bottom of the vessel.

4.8.3.26 Sight Glass connected to a process flare or drains must be blinded. Local sight glass need only be isolated and drain valve open and drain proved to be clear and not blocked.

4.8.3.27 Ensure air supply is monitored and entanglement of air and / or lifelines are taken care of. Prevent air lines being damaged so that the airflow is restricted or stopped. Ensure all entry and exit ways are clear.

4.8.3.28 DO NOT exceed the duration of activities in Confined Space beyond the time required to complete the task or job identified on the Confined Space Entry Permit.

4.8.3.29 Permit receiver & issuer shall inspect retrieval system prior to initial entry into the confined space area to ensure that the equipment is functioning properly.

4.8.3.30 Comply with Working at Height procedure (YAN-OMS-316.09) for use of scaffolding in confined space. If scaffolding will create additional hurdle to entrance or exit, then it shall be considered in the rescue plan”

4.8.3.31 Keep compressed gas cylinders and welding machines outside, when welding or cutting is being performed in any confined space as Welding gas cylinders are not permitted inside the confined space.

4.8.3.32 Immediately prior to the use of gas welding equipment, the Maintenance Supervisor shall inspect and ensure that all equipment is free of leakage.

4.8.3.33 Any person entering to confined space shall have inspected O2 meter showing Oxygen concentration continuously and alarm in case of oxygen variation. In case of group entry, one person out of four shall have pocket oxygen meter.

4.8.3.34 Interior heat stress shall be monitored by following Heat and Cold Stress procedure (YAN-OMS-3110.06) requirement.

4.8.3.35 Air Conditioner can be installed wherever it is convenient.

4.8.3.36 Each person entering confined space with vertical entry shall wear a full body harness attached to a lifeline at all times with provisions made for rescue from the point of entry. The free end of the lifeline shall be secured outside the confined space (One end is hooked to entrant, other end must be secured (hooked, tighten) outside for retrieval purpose).

4.8.3.37 There may be situations where it shall not be practical to keep lifeline attached to personnel working within a confined space due to confined space configuration, which will impact the rescue to be safe. Lifelines need not be used in the following cases but shall be clearly mentioned in formal JLA as per YAN-OMS-311.02 and Rescue Plan:

a) Where the concentration of structural members piping, equipment and other obstructions to free travel within the confined space is such as to render a lifeline useless for rescue purposes.

b) Where the concentration of workers within the confined space is such that the use of lifelines is likely to cause line entanglement, there-by impeding the rescue effort.

c) Switch off lights and welding torch from confined space when not in use. (This applies to lunch/dinner and coffee/tea breaks as well)

d) Use of rope ladder is not allowed unless no other alternative method is being possible to be used and shall be controlled through approved formal JLA.

e) When work is complete and the confined space is ready to be returned to normal service, the confined space shall be inspected to ensure all Fire protection equipment is installed back and functioning.

4.8.4 Preparation of Confined Space for Maintenance Activity:

4.8.4.1 Isolation:

a) Energy source shall be considered de-energized when the source is removed, locked out / tagged out. Refer to Control Isolation of Hazardous Energy including LOTO procedure (YAN-OMS-316.11) Electrical Safety procedure (YAN-OMS-316.05).

b) Equipment Isolation (Mechanical Isolation): For a confined space entry, the minimum requirement is rated capacity blinding or physical disconnection. Refer to Control Isolation of Hazardous Energy including LOTO procedure (YAN-OMS-316.11) for more details.

Note: N2 connection source to the confined space shall be blinded before allowing entry. In case of N2 header (plant/unit/complex) at battery limit is not blinded, N2 utility stations surrounding the confined space shall be blinded unless N2 source is highly needed; the source can be used through the approval of formal JLA.

4.8.5 Decontamination/Purging:

Equipment to be entered shall be decontaminated and cleaned utilizing different methods as applicable, which include; Draining, De-Pressurizing, Purging, Flushing, Washing, and Steaming etc.

4.8.5.1 Discharge liquids or solids from the equipment. Thoroughly clean pumps and associated equipment of sludge, sediment, and residue.

4.8.5.2 Flush with water and if practical, fill with water and boil.

4.8.5.3 De-contamination shall be perform for the equipment to ensure free of toxic/hydrocarbons before handling the equipment.

4.8.5.4 Purge with inert gas if the equipment previously contained flammable material.

4.8.5.5 Purge with air. Open manholes and atmospheric vent lines. If oily sewer is close by, it should be covered to avoid ingress of hydrocarbon vapors into the confined space.

4.8.5.6 Ensure the low point drains shall remain open to eliminate water accumulation.

4.8.5.7 Achieve safe levels of decontamination for entry into confined spaces by decontaminated the process to the acceptable safe limits.

4.8.5.8 In case of system\equipment, safe limit could not be achieved with decontamination activities risk assessment shall capture the control measures as per safer procedure (YAN-OMS-311.00).

4.8.6 Ventilation

A positive means of ventilating the confined space shall be established and kept operated the entire time while work is in progress. Following tips shall be considered for ventilation: Positioning of mechanical aspirators, drawing of fresh air, routing of exhaust air.

4.8.6.1 Confined Space Ventilation plan (YAN-OMS-316.10W) shall be prepared and approved.

4.8.6.2 Site shall develop master list including all confined space in each area as per Master list YAN-OMS-316.10U

4.8.6.3 Only pneumatic driven blower, fans and movers are allow to ventilate the confined spaces.

4.8.6.4 Air conditioners can be installed as an alternate of ventilation wherever it is convenient. Air Conditioners capacity will be used to identify the ventilation rate required. However, in case of use of Air Conditioners for ventilation, Air Movers shall be kept ready to use in case of Air Conditioners shutdown or any emergency.

4.8.6.5 For any confined space, minimum of 10 cycles of continuous air force ventilation is mandatory before conducting gas test.

4.8.6.6 Fans and air movers shall be ensured that it is electrically bonded and grounded to the vessel.

4.8.6.7 Comply with following point for continuous forced/induced air ventilation in confined space;

4.8.6.8 Ventilation of a space will also vary depending on the type of material that is being ventilated from the space.

4.8.6.9 The ventilation rate inside the confined space including the ventilation rate in the breathing zone shall be 15-20 complete air changes per hour or one cycle every 3-4 minutes for a confined space. It can also be calculated by dividing ventilating equipment flow rate (capacity) over volume of confined space using the same unit system.

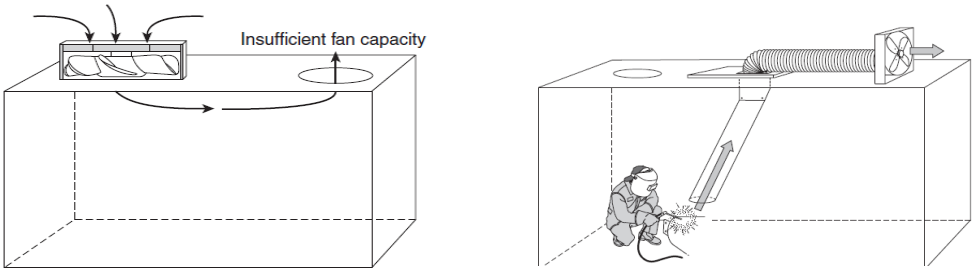
4.8.6.10 Do not use Oxygen/Nitrogen to ventilate confined spaces, as this could lead to oxygen enrichment/deficiency of the space.

4.8.6.11 Ensure air supply for the forced air ventilation comes from clean source and shall not increase the hazards in the space.

4.8.6.12 The exhaust air must be routed so that personnel or equipment is not exposed when a ventilator is used to purge a hazardous atmosphere from the confined space.

4.8.6.13 Do not stop the ventilation system while personnel are inside the confined space, in any case.

4.8.6.14 Ventilation strategy must be developed to ensure thorough air changes within the complete confined space preventing any channeling or pockets of hazardous contaminants still present inside (see Figure#2A and Figure#3).



In-Effective Air Changes #A

Effective Air Changes #B

Figure #2: Example of effective

4.8.6.15 Local exhaust ventilation shall be used during welding activities to extract hazardous fumes and vapors generated during the activity see figure#2B.

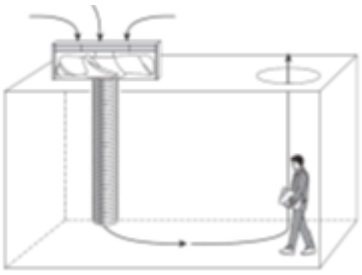


Figure #3: Example of effective

4.8.6.16 Atmospheric monitoring is essential to be done in vicinity of air movers / air conditioners making sure that the air supplied to confined space from external atmosphere is free from any hazardous contaminants.

4.8.7 Work Signboard Requirement

4.8.7.1 During Entry

When personnel are inside the confined space, a signboard containing the following information must be posted at the point of entry of ground level as appropriate.

CAUTION
PHYSICAL ENTRY IN PROGRESS
PERSONNEL WORKING INSIDE CONFINED SPACE

4.8.7.2 Interruption of Entry

When entry is interrupted for any reason, a signboard containing the following information must be posted at each point of entry.

CAUTION
ENTRY IS NOT PERMITTED

4.8.8 Gas Testing Requirements

4.8.8.1 Gas testing of the atmosphere of Confined space: Only authorized gas tester shall perform the gas test by using only calibrated gas detectors.

4.8.8.2 Different toxic substances produce different health effects at different concentrations. It is therefore essential to know and find out what toxic substances could be present in the confined space so that the correct gas testing equipment and their corresponding alarm concentrations on this equipment can be preset to provide a warning in response to a dangerous.

4.8.8.3 Conduct gas test to ensure that:

a) Flammable conditions do not exist;
b) Employees are not exposed to harmful concentrations of toxic substances or oxygen deficient / enriched atmospheres;
c) Toxic and combustible gases shall be within safe limit.
d) Stop ventilation / purging at least 15 minutes prior to conducting the initial gas tests, to allow gas concentration to equalize.
e) Perform gas tests throughout large spaces such as tanks, drums, towers or excavations where it may be possible for gas to be trapped in dead ends of nozzles, plugged down-comers, structural members, etc.

f) The gas tester shall not enter the confined space for testing purposes unless the results across the cross section (top, middle and bottom sections) indicate that the oxygen level range between 19.5%~21%.

g) In case of the gas tester need to enter confined space, he shall fulfill the following requirements:

1) Shall wear SCBA
2) Assign standby man to monitor his entry through log sheet.
3) For continues basis gas testing, Test results shall be recorded on the confined space entry permit. Testing on a continuous basis or continuous monitoring must be required depending upon conditions.
4) Flammable Vapors: Atmosphere within the confined space shall be checked with an approved and calibrated gas detector. If entry is required to carry out complete testing, continuous explosively measurement shall be made as the confined space is entered. Under no circumstances shall entry for testing be continued if measurement of explosively exceeds 0% of LEL (Lower Explosive Limit) at any stage of entry.
5) Oxygen Content: Level in the confined space shall be measured with an approved & calibrated oxygen meter. Entry shall only be permitted if the oxygen presence is range between 19.5%~21%.

4.8.9 Tools, Equipment's and PPE's Requirements:

4.8.9.1 Tools Requirement

a) Pneumatic tools to be used inside confined space shall only be connected to an air compressor approved for breathing air service and monitored to guard against contamination of the intake air.

b) The inspection of hand power tools shall be done as per Tools Handling procedure (YAN-OMS-316.07).

c) Respiratory protection equipment: Based on the results of the gas tests and a review of the work to be performed, if abnormal atmospheres can be expected, lifeline must be used.

4.8.9.2 Electrical Equipment's Requirements

a) For any confined spaces, only 24V explosion proof light shall be used for illumination.

b) All electrical equipment shall be inspected and tested including the GFCI before operating them prior to initial use. One GFCI can be used in distribution panel for number of cables as per capacity.

Note: In conducting confined spaces (where contact with metal cannot be avoided) electrical equipment shall only be used in accordance with Electrical Safety procedure

(YAN-OMS-316.05). In the absence of regulations, electrical equipment shall only be used when one of the following is met:

c) Own source of energy (battery)
d) Extra Low Voltage: ≤ 50VAC or ≤120VDC
e) Class 2 connected to a galvanic separation transformer located outside the confined space
f) Each Confined Space shall have spare approved classified / explosion proof flashlight available with Standby Man.
g) Flexible/extension cords, hand and stand lights shall be provided with an electrical inspection sticker for Confined Space separately. The sticker shall include clear yellow mark "For Confined Space Only", name of the inspector, date of the inspection and the date of the expiration.
h) Damaged/frayed Flexible cords/cables/wires shall not be used. Cords shall be inspected before each use. Flexible cords shall be used only in continuous lengths without splice or tape.
i) All electrical cables and wires shall be arranged and organized to prevent any slip, trip or even any other hazards.

4.8.10 Scaffolding Requirements inside Confined Space

4.8.10.1 Fall protection shall be adhered as per Working at Height procedure (YAN-OMS-316.09) requirements and anchorage points / lifelines shall be as per NFPA 1983 certified or equivalent (1/2" 9000lb strength – Static Kernmantle Construction Rope)

4.8.10.2 Aluminum tubing shall not be used where there is likelihood of contact with materials harmful to aluminum such as caustic liquids, damp lime, wet cement, and seawater.

4.8.11 PPE's Requirements (For confined space)

4.8.11.1 SCBA (Self Contained Breathing Apparatus) is mandatory to be worn during the gas testing for toxic atmosphere and oxygen deficiency atmosphere

4.8.11.2 SCBA is mandatory to be with Standby Man at the equipment entrance.

4.8.11.3 All personal protective equipment shall be in good condition prior to be used as specified in the work permit.

4.8.11.4 Authorized entrants must wear safety harnesses or a built-in harness with lifeline for confined space entries and only if rescue plan require it.

4.8.11.5 Lifelines shall must be tied securely outside the confined space to prevent inadvertently pulling the lifelines into the confined space.

4.8.11.6 In some confined space areas, it may not be practical to have the lifelines attached due to the configuration of the confined space or the number of people involved in the confined space. Such cases shall be discussed in formal JLA & rescue plan for alternate safe rescue

arrangements. I.e. Full body harness or safety coveralls with a built in harness shall always be worn and the lifelines shall be kept ready at the confined space entry access point for emergency use.

4.8.12 Emergency Equipment Requirements

4.8.12.1 Permit issuer & receiver shall ensure concern users inspected lifelines for any defects or damages prior to all confined space entries.

4.8.12.2 The following minimum equipment must be maintained ready for emergency use at the point of entry:

a) Appropriate length of lifeline.
b) Self-contained, 60 minutes' positive pressure breathing air apparatus (Air Pak).
c) Fire Extinguisher.
d) Radio/Air horn or other adequate communication device(s) to summon additional help in case of an emergency.

4.8.13 Hot Work inside the Confined Space

Consider following points for hot work activities in confined spaces:

4.8.13.1 Ensure adequate ventilation at all times when performing hot work in a confined space.

4.8.13.2 No gas torches shall be left unattended inside any confined space.

4.8.13.3 Disconnect the hose at regulator, if removal of the torches is impractical inside confined space.

4.8.13.4 Do not permit welding or cutting activities in an oxygen-enriched atmosphere.

4.8.13.5 Any hot work shall consist of minimum dry chemical fire extinguishers located at the work site outside the confined space in addition to any unit fire protection equipment available at the area. Water hose, fire resistant blankets etc. shall be readily available for use whenever and wherever hot work is performed. Ensure all measures taken for fire prevention & fire protection.

4.8.13.6 Remove any flammable and combustible material from the area. If maintenance activity requires combustible materials to be used inside confined space during Mechanical Hot activities (wood scaffolding, paint ….) shall be permitted through Formal JLA

4.8.13.7 Fire blankets shall be UL listed (Under Writer laboratory) FM approved (Factory Mutual) or any other certified, recognized international organization.

4.8.13.8 Disposable (white/light) coverall is not allowed to be worn during any hot work activities.

4.8.13.9 Do not permit more than one Hot Work Activity at same time in one confined space.

4.8.14 Standby Man Responsibilities:

Standby Man Shall be direct hire or contractor employee who is trained/qualified, certified and interviewed by EHSS Department, authorized by his sponsoring Department Sr. Manager

4.8.14.1 To monitor the entry site

4.8.14.2 Seek emergency assistance to ensure the safety of personnel present within the confined space.

4.8.14.3 Maintain a record of all persons entering / exiting the confined space at each entry or exit at the back of confined space permit. Additional sheet can be used upon requirement.

4.8.14.4 Wear Color vest for identification.

4.8.14.5 Terminate the entry in case of any condition changes at site as per Confined Space permit.

4.8.14.6 Notify to Fire Watch/ permit issuer/Permit Receiver if a confined space entry is aborted due to premature termination of action, equipment failure, and inadequate procedure, medical or other emergency that requires immediate departure from the confined space.

4.8.14.7 Not enter in confined space in any circumstance and shall not leave the site.

4.8.14.8 Monitor the entry site and seek emergency assistance to ensure the safety of personnel present within the confined space.

4.8.14.9 Maintain visual /verbal contact and maintain eye contact with entrants with the workers inside the confined space.

4.8.14.10 Stop work if the conditions deteriorate.

4.8.14.11 Sounding the air horn alarm to notify everyone that the confined space shall be evacuated.

4.8.14.12 Use of a portable radio for communication or air horn.

4.8.14.13 Notify the permit issuer if a confined space entry is aborted due to premature termination of action / operation occupancy of the confined space due to equipment failure, inadequate procedure, medical or other emergency that requires immediate departure from the confined space.

4.8.14.14 Standby man shall ensure entrants condition by frequent communication.

4.8.14.15 Ask all the entrants to leave the confined space immediately in case of emergency, and perform the headcount ensuring all safe and no one leftover.

4.8.14.16 Assist in evacuating personnel during the emergency without entering confined space.

4.8.14.17 Maintain eye contact with the entrants as much as possible. In certain cases, eye contact and visibility of entrants to confined spaces can be hindered due to the size of the equipment or the configurations. In such cases, additional standby men (if required) can be added with one stationed outside the entry point and the other being inside who can maintain eye contact with the entrants and the external standby man.

4.8.14.18 Familiar with the Radio Emergency red button / Emergency Assembly Area.

4.8.14.19 Whenever Standby Man leave the activity area, the job shall be stopped or endorse to another qualified Standby Man.

4.8.15 Rescue Plan

The Rescue Plan (YAN-OMS-316.10) is an integral part of Confined Space Entry Permit. No Confined Space Entry is allowed without approved Rescue Plan. For rescue plan, below guidelines to be followed in addition of Rescue Plan (YAN-OMS-316.10K).

4.8.15.1 Rescue plan shall be conducted by a formal team consisting of Fire Captain (Fire shift Supervisor) or above (Incident Commander or Fire Manager), Operation (Supervisor & above) and Maintenance (Supervisor & above).

4.8.15.2 Rescue Plan (YAN-OMS-316.10K) shall be attached with confined space entry permit at site.

4.8.15.3 Rescue Plan shall be approved /revalidate by Fire Captain (Fire shift Supervisor) / Incident Commander / Fire Manager, before start of any confined space entry and Permit issuer shall notify Fire Captain (Fire shift Supervisor) or above (Incident Commander or Fire Manager), about any change in the confined space during the time of entry.

4.8.15.4 Ensure availability of a retrieval system (retrieval line, full body harness, and a lifting device) to retrieve personnel from vertical type confined spaces more than 1.5-meter deep “if applicable by rescue plan”.

4.8.15.5 Attach other end of the retrieval line to a mechanical device or fixed point outside the confined space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

4.8.15.6 Fire captain (fire shift supervisor)/ Incident Commander / Fire Manager is responsible to provide specifications of Mechanical device used for rescue purpose in Rescue Plan.

4.8.15.7 Use safety harness that permits easy rescue of personnel from the confined space during emergency conditions and avoid suspending a person in an upright position either due to harness type that or the wrist type rescue harness. (A hoisting device or other effective means for lifting personnel from confined spaces is preferred).

4.8.15.8 The permit issuer (Supervisor) shall notify the Fire captain/ Incident Commander / Fire Manager about the activity each shift as per the rescue plan.

4.8.15.9 Rescue Man is required as per rescue plan output; Rescue Man is required to be at location during the job execution.

4.8.15.10 Rescue Man shall be available at location and responsible for:

a) Familiarize with provided rescue equipment and certified as rescue-II from SFTC.

b) Guide ERT team in case of emergency initiated.

4.8.15.11 During Confined Space Entries, area qualified operators shall ensure the full compliance of confined space guidelines and do the necessarily actions to eliminate unsafe act/conditions by monitoring the condition of the areas for vapor releases, alarms or other situations that could endanger personnel working inside the confined spaces.

4.8.16 Personnel Entering Confined Space (Entrants)

4.8.16.1 Ensuring that Work Permit related to the physical entry for the confined space is available.

4.8.16.2 Informing the entry attendant before entering and after exiting the confined space by filling and signing the Confined Space Entry Log Sheet.

4.8.16.3 On columns, vessels etc., personnel who enter from one manhole and intend to exit from another manhole shall register at the manhole they intend to exit from i.e. they shall sign the confined space log sheet and inform the entry attendant at the manhole of their planned exit, before entering the vessel.

4.8.16.4 Complying with all the requirements of the safe work permit for entry.

4.8.16.5 Knows and understand the hazards in the Confined space.

4.8.16.6 Knows and uses equipment properly,

4.8.16.7 Is able to communicate with the attendant.

4.8.16.8 Knows what the acceptable entry conditions for the space are,

4.8.16.9 Knows how to contact the attendant if conditions become unacceptable,

4.8.16.10 Exits the space when ordered, when alarm sounds, or when dangerous situation is noted.

4.9 Excavation Work Permits

Excavation means any activity where the surface of the ground is penetrated starting from 10 cm depth.

Excavation Work Permit (YAN-OMS-316.10E) issuing in classified and non-classified area regardless of tools to be used (Manual/Machine Excavation). Hazardous Assessment and control Form shall be made by the receiver and permit issuer to seek an alternative means of completing the required activity.

Excavation Clearance (YAN-OMS-316.10O) shall be obtained & approved prior to excavation work permit.

4.9.1 All underground areas and services including foundations, pipelines, cables, drains and channels shall be identified (e.g. through P&ID's, site & plant layout drawings) as part of the process for raising an excavation permit for the specified area of work. This to make people aware about the underground risks prior to breaking the ground.

4.9.2 Use of a cable locator and/or other techniques such as exploratory excavation to identify the location of underground services shall be implemented.

4.9.3 If the presence of any underground services is indicated, the underground services shall be exposed and exactly located by hand tool excavation only.

4.9.4 No mechanical excavation shall be made within 1 meter of any underground services and is only allowed to a depth where it is confirmed that no services are in place.

4.9.5 All activities involving excavations and/or ground disturbance shall follow the work permit process unless specifically exempted through an approved risk assessed process which documents the reasons why they were exempted.

4.9.6 The Excavation Work Permit is a basic Assessment for the excavation work to be conduct, which should be sufficient for most activities. If the hazard assessment and control form does not cover the total risk of the specified activities, a formal JLA as per YAN-OMS-311.02 shall be completed. The decision on the requirement for formal JLA shall be the responsibility of the Permit issuer together with the permit

receiver of the Excavation Work Permit Appendix (YAN-OMS-316.10E). This agreement is to be documented through signatures on the Excavation Work Permit.

4.9.7 Any precautions or checks required to verify the presence of buried pipelines, communications and electrical services.

4.9.8 The potential for an oxygen deficient or hazardous atmosphere to develop within the excavation.

4.9.9 The potential for collapse of the excavation and/or ingress of ground water. Included in this consideration shall be an assessment of the environmental conditions (weather) that may change during the period of the work permit.

4.9.10 The potential hazards to be considered shall include those additional ones from the work being performed in the work area.

4.9.11 The requirements for barriers and signage.

4.9.12 The requirements for shoring and/or additional supports.

4.9.13 Excavation more than 1.2 meters (4 feet) deep shall be treated as work requiring a Confined Space Entry Permit in addition to the Excavation Work permit.

4.9.14 The requirements for routine and emergency access/egress.

4.10 Radiation Work Permit

To minimize the exposure to any radiation amount and risk associated with it; also to define safety requirements for working with or near radioactive source equipment, for additional information refer to Ionizing Radiation procedure (YAN-OMS-3110.07). This permit applies to all employees and contractors who design, specify, order, purchase, receive, install, move, relocate, store, ship and work in the vicinity of any equipment containing radioactive materials of any amount using Radiation Work Permit (YAN-OMS-316.10F).

4.10.1 Radiation safety officer (RSO) is responsible for the survey of radiation level around the sources and whenever it is required during NDT, to safeguard the safety of the personnel, and is responsible for maintaining the monitoring equipment, distribution and collection of TLD badges and documentation of personal exposure recorded.

4.10.2 CONTROLLED AREA: shall be established in locations where worker may be exposed to dose limit greater than 3/10 of the occupational exposure limit (3µSv/h).

4.10.3 RADIATION SAFETY OFFICER (RSO): A person who has been selected to be responsible for overseeing radiation safety in organization.

4.10.4 RADIOACTIVE SOURCE: Any source of radiation where the radiation is produced by the decay of radioactive materials rather than electrically, as in an X-Ray machine.

4.10.5 RADIOACTIVE WASTE: The radioactive substances resulting from a source within a practice, which was retained in order to limit emission rates into the ambient environment regardless of the physical state of such substances.

4.10.6 RADIOGRAPHY: The examination of the materials by non-destructive methods utilizing radioactive isotopes or X-Ray generating equipment.

4.10.7 SEALED SOURCE: Sealed capsule containing radioactive material.

4.10.8 Before doing any job on nuclear instruments, the technician/Operator shall:

4.10.8.1 Get Radiation Work permit using Guidelines for Equipment preparation for Maintenance (YAN-OMS-316.10Q).

4.10.8.2 Use his dosimeter - Barricade the work area and the stairs leading to it.

4.10.9 Radiation hazard due to the work shall be announced using Paging system before starting the work.

4.10.10 While working, the source shall be in “closed” or “off” position, (it is not allowed to work on powered "ON" sources). Technician shall lock the shield (use LOTO) in the closed position and stick on a “Do Not Operate” Tag.

4.10.11 It is not allowed to proceed with any practices involving exposure to ionizing radiation without notifying the RSO one week ahead.

4.10.12 Personal Exposure Monitoring equipment (Direct reading dosimeter or (TLD) Thermo-Luminescent Dosimeter shall be provided to all radiation classified workers.

4.10.13 Personal entering the radiation control area during installation, maintenance and removing of source.

4.10.14 All companies’ contractors shall be licensed by the regulatory authority to proceed with any practices involving the use of radioactive sources within YANPET premises. RSO approval shall be taken in advance.

4.10.15 Concerned plant representative shall be notified in writing at least one week prior to the actual work to ensure that the contractor is qualified, authorized and follows proper procedures.

4.10.16 Radiation Permit shall be issued by Area Supervisor and Owner Department Manager’s shall be informed.

4.10.17 NDT (Non-Distractive Test) shall be done when a minimum number of employees are in the plant.

4.10.18 Safe distance shall be calculated according to NDT source strength and redistricted area shall be barricaded with suitable warning signs.

4.10.19 Provide their employees who work in radioactive classified areas with the required training.

4.10.20 Provide their employees with the necessary monitoring equipment.

4.10.21 No person may engage in any activities involving radiation exposure before receiving adequate training on such activity, gaining knowledge of the methods and criteria of protection from radiation and methods of safe work. Therefore, only the authorized worker can work in the same area. Only authorized workers can handle the radioactive sources.

4.10.22 Radiation work permit provides a tool to advice on radiation protection and safety. It contains information about radiation in the given job and means to enhance radiation protection and safety.

4.11 Lifting Permit

This section sets out the requirements for Work Permit controlled lifting operations in accordance with YANPET Life Saving Rules and with the prime objective of protecting personnel from injury and property from damage using Lifting Work Permit (YAN-OMS-316.10G) in supporting with Lifting Plan (YAN-OMS-316.10P).

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The organization including YANPET, contractors and subcontractor responsible for performing the lift shall keep auditable records of lifting equipment certification and competencies of those involved in the lift (including appropriate certification/licenses for the task as required by local regulations).

Note:

1. Lifting permit shall be issued before the entry of lifting equipment into the classified area to consider the potentiality of fire ignition hazard of lifting equipment.
2. Lifting activity through fixed crane (overhead crane) for operation and preventive maintenance jobs shall be executed under approved SOP/SMP. In case of lifting condition or scope changed, then hazard assessment & control form, lifting plan and lifting permit shall be obtained.
3. Lifting operations which are routinely carried out as part of normal operations or maintenance activities with already built in overhead crane shall be covered by a SOP or SMP with full compliance to Lifting Equipment procedure (YAN-OMS-316.06) requirements. In the SOP/SMP, the lifting activities risk shall be assessed and the controls built into the specified work method.

4.11.1 Definitions:

4.11.1.1 Lifting Permit: Lifting Permit control any lifting operations which are essentially non-routine activities.

4.11.1.2 Lifting Operations: Lifting operations are the lifting of any load/object using a Crane (Fixed/Mobile) and chain block.

4.11.2 Lifting operations shall be controlled through a Lifting Permit, which is required the Hazardous Assessment and Control Form in addition to Lift Plan and shall be aligned with Lifting Equipment procedure (YAN-OMS-316.06) requirements on safe lifting.

4.11.3 The isolation of personnel from lifting operations (by barricading the affecting area using of physical barricades to create an exclusion zone) shall be considered in the Lifting Permit for the task.

4.11.4 Immediately prior to starting lifting operations or recommencing lifting operations following permit revalidation, the issuer shall:

4.11.4.1 Verify that the risks have been assessed, and the control and mitigation measures are in place.

4.11.4.2 Verify safe conditions through workplace inspection.

4.11.5 Lifting Permit Implementation

4.11.5.1 Lifting operations shall be conducted by YANPET competent staff, accredited contractors or sub-contractors engaged through contractors YANPET accredited to manage sub-contractors.

4.11.5.2 Workforce members who are not involved with the lift shall be restricted from the lift zone through effective barrier management and the placement of exclusion zones.

4.11.5.3 Personnel involved in lifting operations shall not walk under the load once the lift has commenced.

4.11.6 Lifting Permit shall include the following:

4.11.6.1 Number of personnel, roles and certification references.

4.11.6.2 References to associated documentation (Lifting Equipment inspection checklist, The Hazardous Assessment and Control Form, Formal JLA as per the YAN-OMS-311.02 and Lifting Plan).

4.11.6.3 Other proximity hazards e.g. lifting over live plant, overhead power cables, public roads, etc.

4.11.6.4 Verification that specified lifting equipment has been visually inspected and certified accordance to Lifting Equipment Inspection Checklist in Lifting Equipment procedure (YAN-OMS-316.06) prior to the lift commencing.

4.11.6.5 Consideration of the placement of lifting equipment, plus potential consequences of catastrophic failure or unintended motion of the load or equipment, with particular attention to other proximity hazards and areas where people congregate.

4.11.6.6 Load integrity and dropped object inspections.

4.11.6.7 Wind / weather (e.g. limitations of cranes, sail area of load).

Note: Issuer and Receiver shall confirm that each individual lifting task is correctly assessed and planned for the conditions it is to be conducted in.

4.12 High Pressure Jetting Work Permit

This section provides requirements for HP water jetting & Sand Blasting Work Permit using High Pressure Jetting Work Permit (YAN-OMS-316.10H). Where possible and available hands-free High Pressure water Jetting & Sand Blasting utilizing machine shall be the preferred option to be followed. HPWJ shall only take place after the following steps have been completed.

Hazardous Assessment and Control Form shall be performed by the receiver and permit issuer to seek an alternative means of completing the required activity without the need for HPJ. That this assessment has taken place shall be documented on the HPJ permit following a conclusion having been reached that this activity is required.

4.12.1 Definitions.

4.12.1.1 Anti-Withdrawal Device (Back Out Preventer)

A device installed on the pipe entrance to prevent the nozzle on the end of the hose from being pulled out of the pipe under pressure.

4.12.1.2 Dry Shutoff Control Valve

A valve that is normally manually controlled by the Lance or Nozzle Operator to start and stop the flow of water to the nozzle. Although closing this valve stops the water flow to the nozzle, it keeps the pressure in the supply line at the system's working pressure. When this valve is used, the system must be fitted with an automatic pressure-regulating valve to ensure the system's working pressure is not exceeded.

4.12.1.3 Jetting Gun (Shotgun)

A hand-operated device that is used in manual water jetting. It is normally connected to the high-pressure system by a high-pressure hose assembly. The gun is made up of a control valve mounted within a guard, a lance section, and a nozzle assembly which may include one or more nozzles. The gun may also include a support bracket and shoulder pad and/or one or more support handles. The gun can be further defined by the type of control valve that is used to release the pressure. If the pressure is released to atmosphere it is a dump gun. If the pressure is retained in the system by using a Dry Shutoff Control Valve, then it is a dry shutoff gun.

4.12.1.4 Lancing

An application where a rigid or flexible lance and nozzle combination is inserted into and extracted from the interior of a pipe or tubular opening.

4.12.1.5 Moleing

A hose fitted with a nozzle is inserted into and retracted from the interior of a pipe. It is commonly used with a self-propelling nozzle for cleaning the internal surface of pipes and drains. Moles can be self-propelled by their backward-directed jets or manufactured to be fitted with various shapes, sizes, and combinations of forward-directed and backward-directed jets. A mole should include a section of rigid pipe or tubing directly behind the nozzle assembly that is sufficiently long enough to prevent the mole from turning around within the pipe.

4.12.1.6 Nozzle Operator

The member of a HPWJ Team who holds a gun, lance, or delivery hose and controls the motion and direction of the jet(s).

4.12.1.7 Stinger

Rigid tubing or pipe mounted behind the nozzle assembly for use with a flexible lance or hose. Stingers are generally used on small-diameter piping and heat exchanger tubes.

4.12.1.8 Whip Check

A short length of wire or cable looped over each end of two hoses that are connected by a coupling. A whip check is designed to stop the ends of hoses from whipping around if the coupling breaks.

4.12.2 Planning and Preparing for Rescue

Emergency response arrangements shall include:

4.12.2.1 The arrangements for contacting emergency response resources.

4.12.2.2 The provision of a Fire watch who is dedicated to the specific work activity, is trained and has been verified as competent for this role.

a) Conducting and Monitoring HPJ.
b) The HPJ Permit shall be displayed at the worksite.
c) If a potentially hazardous condition is detected during the work:

1. The Permit shall be withdrawn.
2. All the members of the work party shall leave the area adjacent to the work immediately.
3. The receiver shall immediately notify the responsible issuer.
4. The cause of the changed conditions at the work site shall be evaluated to determine how the hazardous condition developed. Measures shall be implemented to eliminate the hazardous prior to any subsequent work.
   Note: If an HPJ work activity is stopped due to the premature termination of the work, due to equipment failure, inadequate procedure, medical or other emergency that requires immediate departure from the work site, the permit receiver shall notify the responsible issuer as soon as possible.

4.12.3 Sandblasting Hazards

Abrasive blasting operations can create high levels of dust and noise. Abrasive material and the surface being blasted may contain toxic materials (e.g., lead paint, silica) that are hazardous to workers.

4.12.4 Control Measures

4.12.4.1 Substitution

a) Use a less toxic abrasive blasting material.
b) Use abrasives that can be delivered with water (slurry) to reduce dust.

4.12.4.2 Isolation and Containment

a) Use barriers and curtain walls to isolate the blasting operation from other workers.
b) Use blast rooms or blast cabinets for smaller operations.
c) Use restricted areas for non-enclosed blasting operations.
d) Keep coworkers away from the blaster.

4.12.5 Ventilation

Use exhaust ventilation systems in containment structures to capture dust.

4.13 Authorization and Renewal

Each employee or contractor who is qualified under any of the sections of this procedure shall be issued a wallet size authorization card (Work Permit Authorization Card- YAN-OMS-316.10J) approved by EHSS Senior Manager. This card shall be identified the employee or contractor employee's qualifications and shall be carried on by the person while at work.

4.13.1 Work Permit Authorization card has a Validity of three years for direct hire employees.
4.13.2 Contractor WP card authorization card has a Validity as per YANPET Contractor ID card.
4.13.3 YANPET Concerned department shall maintain list of authorized personnel.
4.13.4 Refresher Training shall be provided to employees/contractors:
4.13.5 Every three years.

4.13.6 After major revision of this procedure.

4.13.7 Authorization card expired

4.13.8 The duration of this refresher is one-day classroom training. It consists of overview of updating permit procedure, explanation case study for all previous incidents or findings related to safe work practice.

4.13.9 Refresher Training shall include passing a test that ensures the employee understands the interpretation and intent of this procedure to acquire the knowledge and skills necessary for the safe performance of their assigned duties, if the employee fails then he shall apply for re-test and if failed again, he shall attend Three days new training program.

4.14 Training

4.14.1 This procedure covers the qualification of the following:

4.14.1.1 Permit Issuer

4.14.1.2 Permit Receiver

4.14.1.3 JLA training

4.14.1.4 Gas Tester

4.14.1.5 Fire watch/Standby Man

4.14.1.6 Plant manager (half day class training).

4.14.2 Work Permits procedure (YAN-OMS-316.10) Sub-Element shall develop specific training and competence verification routes for each roles.

4.14.3 Refresher training programs is developed for each role listed above. This refresher training is conducted at a minimum frequency of every three years.

4.14.4 Work Permit Instructor Qualifications Eligibility:

4.14.4.1 Has total experience 10 years' in industrial plants.

4.14.4.2 Has completed minimum training skills (Train the Trainer).

4.14.4.3 Attend and pass Work Permit exam.

4.14.4.4 Approved as work permit instructor by Element Leader/Sub-Element Leader after deliver at least one success Work Permit session.

4.14.5 Permit Issuer and Receiver Qualifications Eligibility:

Criteria	Permit Issuer	Permit Receiver	
Employee Status	Direct Hire	Direct Hire	Contractor
English Level	3		

Years of Experience	Minimum 3 years' experience in YANPET or overall 5 years' industrial experience.	Minimum 3 years' experience in YANPET or overall 5 years industrial experience.	Minimum 3 years' experience in YANPET or overall 5 years industrial experience.

Table #4.14.5: Permit Issuer and Receiver Qualifications Eligibility

4.14.6 The following criteria shall be met before & after attending the class:

4.14.6.1 Competency of employees & contractor nominated person has to be ensured by Dept. Sr. Manager.

4.14.6.2 Nominated by his management to attend the class.

4.14.6.3 Trainer has to submit the work permit training attendees & result to representative department.

4.14.7 The candidate shall meet the following requirements:

4.14.7.1 As a Pre-requisite employees /Contractor attending the work permit shall complete the following Safe Work Practices procedure (YAN-OMS-316.00) Awareness session.

a. YAN-OMS-316.01 General EHSS Rules
b. YAN-OMS-316.03 Material Handling and Storage
c. YAN-OMS-316.04 Prevention of Fires and Explosions from Combustible Dust
d. YAN-OMS-316.05 Electrical Safety
e. YAN-OMS-316.06 Lifting Equipment
f. YAN-OMS-316.07 Tools Handling
g. YAN-OMS-316.08 Personal Protective Equipment
h. YAN-OMS-316.09 Working at Height
i YAN-OMS-316.11 Control Isolation of Hazardous Energy including LOTO

4.14.7.2 Successfully complete Work Permit Training class by achieving overall minimum score of 80% on the work permit test.

4.14.7.3 The candidate shall be able to exercise the work permit filling, if not able to do, he shall not be eligible for test.

4.14.7.4 If he failed in work permit test, the candidate maybe appear for the second test within two months'. If candidate fails for the second time, the candidate shall attend the class again and re-tested.

4.14.7.5 If he failed in third test, the candidate shall not be allowed to attend the class unless his management entitled him into YAN-OMS competency training program as per

Training & Competencies procedure (YAN-OMS-131) & Third Party EHSS Management procedure (YAN-OMS-313).

4.14.8 Work Permit Training

A comprehensive training program followed by tests shall be conducted for required employees covering as minimum required of the following course content:

Days	Items
Day 1	Introduction
	Hazard Assessment & Control Form as well as JLA workshop
	Work Permit Process Overview
	Preparing & Planning
Day 2	Monitoring and Control of Permitted Work Activity
	Certificates
	General Work Permit
	Hot Work
Day 3	Confined Space Entry Permit Hazards
	Excavation Permit
	Electrical Permit
	Lifting Permit
	High Pressure Jetting Permit
	Radiation Permit
	Exam

Table #4.14.8 (1): Work Permit Training Matrix

Work Permit Training for Line Management	
Days	**Items**
Day 1	Introduction
	Hazard Assessment & Control and JLA
	Work Permit Process Overview
	Monitoring and Control of Permitted Work Activity
	Preparing & Planning

Table #4.14.8 (2): Work Permit Training for Line Management

4.14.9 Gas Testing Training

4.14.9.1 Department Senior Manager shall nominate the gas tester. EHSS department shall issue the authorization of gas tester.

4.14.9.2 Training and qualification program includes classroom and field instruction. Such training will be completed prior to the employee using the equipment without supervision.

4.14.9.3 Training program includes instruction course on types of gas meters used in Plant, their proper use, care, user inspection / calibration, routine replacement of consumable parts (batteries, filters, bulbs, hoses, and carrying straps) and limitations.

4.14.9.4 Gas testers' shall pass a written test with a minimum 80% score. In addition to passing the written qualification test, trainees shall demonstrate, to the satisfaction of the instructor, their ability to perform pre-operation checks, demonstrate proper use, care, user inspection / auto calibration, routine replacement of consumable parts (batteries, filters, bulbs, hoses and carrying straps) and give its limitations.

4.14.10 Fire Watch/Standby Man Qualifications

4.14.10.1 Fire watch shall attend training and pass the Fire watch/Standby Man test with minimum core of 80%.

4.14.10.2 Training shall include basic use of Fire extinguisher.

4.14.10.3 English level shall be minimum Level 2.

4.14.11 Yearly 4th quarter WFD training coordinator shall communicate to all plant manager identifying year plan activities such as TAM, planned & unplanned shutdown, number of expired authorization card required for open classroom.

4.14.12 Periodic Compliance Audit

Conduct periodic inspections to verify that all work permit requirements are being met using Work Permit Compliance Checklist (YAN-OMS-316.10T) as per below table.

Auditor	Frequency
Element/ Sub-Element Leader	Once per quarter
EHS representative/ SHEM Administrator	4 per Month

Table #4.14.12: Periodic Compliance Audit

4.15 Control of Records

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The following records are identified and described in the record control requirements pertaining to this procedure in accordance with Documentation & Control of Records procedure (YAN-OMS-234):

Sr. No.	Record Description	Type	Location	Responsibility	Retention Period
1	Approved procedure (YAN-OMS-316.10) (SHE-MS-08.10)	Hard	YAN-OMS Administrator's office	YAN-OMS Administrator	Current
2	Approved procedure (YAN-OMS-316.10) (SHE-MS-08.10)	Soft	YANPET Portal / Approved digital storage	YAN-OMS Administrator	Current & Previous Revision
3	Approved procedure (YAN-OMS-316.10) (SHE-MS-08.10)	Soft	YAN-OMS Administrator's Office	YAN-OMS Administrator	Current

Table 7.2 a: Documentation (Procedure)

No.	Document	Record Owner	Location	Retention Time	Retention Purpose
7.2.1	All type of Work Permit	Permit Issuer	Supervisor Office	3 month	Auditing & Investigation
7.2.2	Hazard assessment & control form	Permit Issuer	Supervisor Office	3 month	Auditing & Investigation
7.2.3	Daily / Weekly Checklist for Gas Detectors	Permit Issuer	Supervisor Office	1 Year	Track History Of Gas Detectors care
7.2.4	Welding checklist	Permit Issuer	Supervisor Office	3 month	Auditing & Investigation
7.2.5	Hot Tapping Data Sheet	Permit Receiver	Manager Office	1 Year	Analysis & Investigation
7.2.6	Tracking of KPIs	YAN-OMS-316 EL	YAN-OMS-316 EL	3 Year	Knowledge

Table #7.2 b: Control of Records

5. COMPETENCY

The following competency matrix is develop based on YANPET Organization Structure as per the requirements of Training & Competence Procedure (YAN-OMS-131). The matrix identifies the key skills and knowledge required to successfully implement this procedure. These competencies are mapped to critical functional roles within the organization structure.

Competency (Skill / Qualification)	Type	(Plant) Line Management	EHSS Sr. Mgr.	Area Mgr.	SHEM Specialist	Elect/ Civil/ Mech Engr.	Issuers	Receivers	Standby/Fire Watch	Gas Tester
Knowledge of this procedure requirements		D	D	P	P	P	A	A	P	P
Demonstrated competence on the effective implementation of this procedure		D	D	P	P	P	A	A	P	P
Remain up-to-date on relevant knowledge through periodic refresher training		D	D	P	P	P	A	A	P	P

Table #5.0: Competency Matrix for Critical Functions

Competency Types: Core Leadership Functional

Proficiency Levels: **D** Developing **P** Proficient **A** Advanced

6. CONTINUAL IMPROVEMENT

6.1 Measures Indicators (MI), Performance Indicators (PI) and Key Performance Indicator (KPI) are defined below.

Reference # Performance Management (YAN-OMS-211)	Title	Frequency	Rhythm
01	# Overdue Action Plans	Monthly	Sub-Element Committee Meeting

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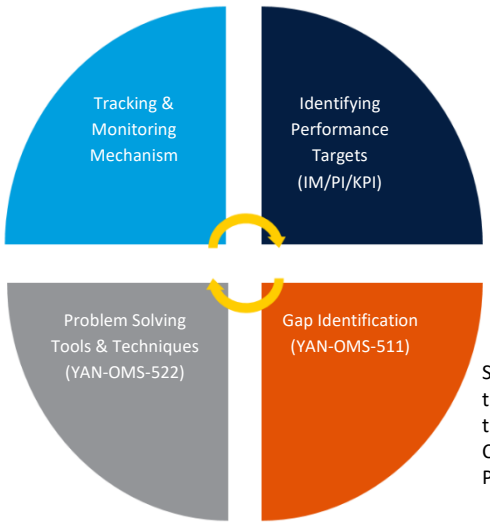
Reference # Performance Management (YAN-OMS-211)	Title	Frequency	Rhythm
02	Reduction Class A,B,C & HiPo incident	Annually	
03	100% completed number of Periodic Inspections	Monthly	

Table #6.1: KPI

6.2 Continual Improvement Process

Recommendations shall be included in OMS/ objectives in accordance to YAN-OMS-122 using Appendix YAN-OMS-122 H. Required corrective and preventive actions shall be generated and tracked appropriately to organization personnel and stakeholders on a regular basis using Q-Pulse or other tracking system.

Measures Indicators (MI), Performance Indicators (PI) and Key Performance Indicator (KPI) are defined in Table 6.1: KPI.



Effective problem solving methods and tools shall be identified and utilized to close the gaps in accordance with Process Improvement Methodologies & Problem Solving Tools & Techniques Procedure (YAN-OMS-521) and generate recommendations.

Statistical tools shall be used to analyze the performance and identify the gaps of this procedure in accordance with Continual Improvement Framework Procedure (YAN-OMS-511).

7. REFERENCES

7.1 Links with other YAN-OMS procedures

Input	Interface / link	Output
Leadership Commitment and Culture (YAN-OMS-111)	Leadership, Commitment & Culture	Work Permits (YAN-OMS-316.10)
Site Organization Design (YAN-OMS-121)	Site Organization Design	
Management of Personnel & Organizational Change (YAN-OMS-123)	Management of personal & organizational change	

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Input	Interface / link	Output
Training & Competencies (YAN-OMS-131)	Training & Competency	
Performance Management (YAN-OMS-211)	Performance Management	
Policy & Management System Development (YAN-OMS-231)	Policy & Management System Development	
Compliance, Assessments and Evaluation (YAN-OMS-232)	Compliance Assessments & Evaluation	Work Permits (YAN-OMS-316.10)
Stakeholder Communication and Engagement (YAN-OMS-233)	Stakeholder Communication & Engagement	
Documentation and Control of Records (YAN-OMS-234)	Documentation & Control of Records	
Continual Improvement Framework & Continual Improvement Qualification & Certification (YAN-OMS-511)	Continual Improvement Framework	
Process Improvement Methodologies & Problem Solving Tools & Techniques (YAN-OMS-522)	Problem Solving Tools & Techniques	
Health and Safety Risk Assessment (YAN-OMS-311.02)	Risk assessment requirements for JLA and explanation about the JLA process.	
Third Party EHSS Management (YAN-OMS-313)	Use of approved contractors.	
Pre-startup SHE Reviews (YAN-OMS-314)	Pre-startup SHE Review	
General EHSS Rules (SHE-MS-08.01) (YAN-OMS-316.01)	Requirements for use of tags.	
Material Handling and Storage (YAN-OMS-316.03)	Cylinders, hoses and accessories specifications and handling and storage requirements.	
Electrical Safety (YAN-OMS-316.05)	Requirements on electrical aspects and classification.	
Lifting Equipment (YAN-OMS-316.06)	Requirements on safe lifting.	Work Permits (YAN-OMS-316.10)
Tools Handling (YAN-OMS-316.07)	Correct use of tools considerations.	
Personal Protective Equipment (YAN-OMS-316.08)	Identification of PPE and clothing requirements.	
Working at Height (YAN-OMS-316.09)	Working at Height	
Control Isolation of Hazardous Energy including LOTO (YAN-OMS-316.11)	Requirements on lock out, tag out, isolation and line break in connection with work permits.	
Management of Change (YAN-OMS-317)	MOC process to be followed in case of changes.	

Input	Interface / link	Output
EHSS Incident Reporting, Classification, Investigation & Analysis (YAN-OMS-318)	EHSS Incident Reporting, Classification, Investigation & Analysis	
Emergency Planning and Response (YAN-OMS-319)	Identification of rescue plans and availability of the emergency response equipment and crew during emergencies.	
Heat and Cold Stress (YAN-OMS-311.06)	Heat and General Stress	
Ionizing Radiation (YAN-OMS-311.07)	Ionizing Radiation	
Transportation Safety (Road Transportation of Materials) (YAN-OMS-3113)	Road Transportation of Materials	
Material Handling and Storage (YAN-OMS-316.03)	Material Handling & Storage related Product SDS/Label Preparation & Communication	
HCIS-SAF	SAF-13 related Work Permit	
Third Party EHSS Management (YAN-OMS-313)	3rd Party EHSS Management	

Table #7.1: Interfaces and Linkages

7.2 Glossary, Formulae & Definitions

This section shall list all the Glossary, Formulae and Definitions relevant to this procedure.

Glossary	Definition
ACGIH	American Conference of Governmental Industrial Hygienists
AIR	Accident Incident Recommendations
EL	Element Leader
EHS	Environment, Health & Safety
EHSS	Environment Health Safety Security
EMS	Environmental Management System
ERP	Emergency Response Preparedness
HCP	Hearing Conservation Program
HLVI	High Learning Value Incident
KPI	Key Performance Indicator
LMS	Learning Management System
MOC	Management of Change
NIHL	Noise Induced Hearing Loss
NIOSH	National Institute for Occupational Safety & Health
OSHA	Occupational Safety & Health Administration
YAN-OMS	Operations Management System

Glossary	Definition
PHA	Process Hazard Analysis
PI	Performance Indicators
PPE	Personal Protective Equipment
Q-Pulse	Quality Pulse (YAN-OMS Data Base)
RACI	Responsibility, Accountability, Consulted, Informed
SEL	Sub-Element Leader
SHE	Safety, Health & Environment
SHEM	Safety, Health & Environment Management
SHEMS	Safety, Health & Environment Management System
SM	Supplementary Manpower
SFTC	SABIC Fire Training Center
STS	Standard threshold shift
W&CI	Work Force Development & Continual Improvement
TWA	Time Weighted Average
UOM	Unit of measurement

Table #7.3: Glossary, Formulae & Definitions

8. APPENDIX

No.	Appendix No.	Appendix Title	Appendix File
8.1	YAN-OMS-316.10A	General Work Permit	YAN-OMS-316.10A General work permi
8.2	YAN-OMS-316.10B	Hot Work Permit	YAN-OMS-316.10B Hot work permit.do
8.3	YAN-OMS-316.10C	Electrical Work Permit	YAN-OMS-316.10C Electrical work perm

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No.	Appendix No.	Appendix Title	Appendix File
8.4	YAN-OMS-316.10D	Confined Space Entry Work Permit	YAN-OMS-316.10D Confined space entı
8.5	YAN-OMS-316.10E	Excavation Work Permit	YAN-OMS-316.10E Excavation work per
8.6	YAN-OMS-316.10F	Radiation Work Permit	YAN-OMS-316.10F Radiation work perr
8.7	YAN-OMS-316.10G	Lifting Work Permit	YAN-OMS-316.10G Lifting work permit.(
8.8	YAN-OMS-316.10H	High Pressure Jetting Work Permit	YAN-OMS-316.10H High pressure jettin
8.9	YAN-OMS-316.10J	Work Permit Authorization Card	YAN-OMS-310.10J Work permit Author
8.10	YAN-OMS-316.10K	Rescue Plan	YAN-OMS-316.10K Rescue Plan.docx
8.11	YAN-OMS-316.10M	Weekly Check List for Gas Detectors	YAN-OMS-316.10M Weekly checklist for
8.12	YAN-OMS-316.10N	Hot Tapping Data Sheet	YAN-OMS-316.10N Hot tapping data sh
8.13	YAN-OMS-316.10O	Excavation Clearance	YAN-OMS-316.10O Excavatoin Clearanc

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No.	Appendix No.	Appendix Title	Appendix File
8.14	YAN-OMS-316.10P	Lifting Plan	YAN-OMS-316.10P Lifting plan.docx
8.15	YAN-OMS-316.10P I	Lifting Classification Matrix	YAN-OMS-316.10P I Lifting Classification
8.16	YAN-OMS-316.10P II	Lifting Plan General Guidelines	YAN-OMS-316.10P II Lifting plan general
8.17	YAN-OMS-316.10Q	Guidelines for Equipment preparation for Maintenance	YAN-OMS-316.10Q Guidelines for Equip
8.18	YAN-OMS-316.10R	Welding Job Checklist	YAN-OMS-316.10R Welding Job Checkl
8.19	YAN-OMS-316.10S	Work Permit Control Sheet	YAN-OMS-316.10S Work Permit Contro
8.20	YAN-OMS-316.10T	Work Permit Compliance Checklist	YAN-OMS-316.10T Work Permit Compli
8.21	YAN-OMS-316.10U	List of Confined Space	YAN-OMS-316.10U List of Confined Spa
8.22	YAN-OMS-316.10V	Hazard Assessment and Control Form	YAN-OMS-316.10V Hazard assessment a
8.23	YAN-OMS-316.10 W	Confined Space Ventilation Plan	YAN-OMS-316.10W Confined Space Ven

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Table #8.0: Appendix

Attachments

(2)

دليل شركة ينبت للبيئة والصحة والسلامة والأمن الخاص بعمليات الهدم والازالة والنقل

Yanpet Demolishing EHSS Guideline

General EHSS Rules

YAN-OMS-316.01
(SHEMS-08.01)

	Title	Name	Signature	Date
Developed By	OMS Sub-Element Leader	Mohammed Mohanna	M. Alshareef	14 Aug 24
	OMS Element Leader	Mohammed Al-Moslemani		14, Aug, 2024
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	OMS Chairman	Mohammed Al-Juhani		15/08/2024
Approved By	OMS Sponsor	Majid Al-Ghanmi		15/08/2024

CONTENTS

REVISIONS

Revision No.	Date	Revision Description
01	25-August-2019	• Converted From SHE-MS to OMS format.
02	15-March-2021	• Added Covid-19 violations as an 11th Life Saving Rule
03	15-Aug-2024	• Adding Illumination requirements in section 4.7 • Revising as per OMS-231 requirements • Revising Roadblock Permit approval responsibility

1 PURPOSE

The purpose of this management system is to define general safety practices and to establish minimum EHSS rules.

2 SCOPE

The scope of this management system covers the minimum requirements for safety practices and establishes minimum EHSS rules that are required to be followed within YANPET facilities.

3 ROLES AND RESPONSIBILITIES

Roles and responsibilities of all positions that are responsible to support implementation of this management system are clearly identified, documented and communicated as the following:

Activity Description	Senior Management Team	PMT Leader	EHSS Senior Manager	Safety Manager / Engineering	Operator / Operational Engineering	Maintenance / Maintenance Engineering	Management system leader
Identify Training Requirements	A	-	-	-	-	-	R
Develop and track performance indicators	A	-	-	-	-	-	R
Periodic Safety Compliance Assessments	A	R/C	-	C/I	-	-	R
LSR and Major Non-Compliance Investigation	A	-	R	R	-	-	-

Table 3.1 - Responsibility Assignment Matrix

4 REQUIREMENTS

4.1 Office EHSS Rules

4.1.1 Office equipment that is defective (or is suspected to be defective) should not be operated until it is inspected and repaired. Defects include such items as frayed cords, missing or loose mechanical guards, evidence of electrical short circuits or problems, sharp edges or splinters on furniture and excessive play in casters. Hazardous conditions or defects that need repair shall be reported.

4.1.2 Portable machines and temporary devices shall be positioned so as not to be easily knocked over and create a hazard. Machine creep should be monitored. Securing clamps or other devices shall be used where there is significant possibility for a machine or device to fall from its stand or position.

4.1.3 Machines such as shredders and cutters and inlet paper paths in machines shall have guards to prevent injuries. Such machines shall not be operated if guards are not installed and shall preferably be located in a central location rather than on individual office desks.

4.1.4 Trim boards (paper choppers) shall be equipped with a guard in the pinch point zone.

4.1.5 Defective carpet or floor tiles shall be repaired immediately. Worn or warped mats under office chairs should be replaced or repaired. Rubber or plastic floor mats with curled edges or tears should be replaced or repaired.

4.1.6 Drawers on filing cabinets and desks shall be closed when not in use.

4.1.7 Only one drawer in a file cabinet shall be open at any one time in order to prevent tipping. Standard practice should be to load the file cabinet so that it is not top-heavy.

4.1.8 All office furniture shall be kept in good condition.

4.1.9 Unauthorized personnel shall not repair office machines.

4.1.10 The concerned Area owner shall assess the requirement for issuing a work permit of the appropriate type for any maintenance activity being conducted in non-operating areas.

4.1.11 Chemical samples, flammable liquids or compressed gases shall not be stored in offices without proper review and approval (Refer to Attachment 9 for Office Chemical Storing Form) If approved, the chemicals shall be kept at designated places in clearly identified containers and with a means in place to capture leakages if they are potentially hazardous products.

4.1.12 Appropriate fire extinguishers shall be provided as required by the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, it shall be at a maximum travel distance of 33 feet (approximately 10 meters).

4.1.13 Smoke detectors shall be installed as required by applicable local/regional/international standards/regulations requirements.

4.1.14 Emergency lights shall be provided and tested on a regular basis as required by applicable local/regional/international standards/regulations requirements.

4.1.15 Candles, stoves or incense burners should not be used (portable electrical heaters used for heating in buildings are allowed).

4.1.16 Emergency exits shall be kept visible and clear for access.

4.1.17 Ground/earth wires shall not be removed.

4.1.18 Electrical cords and plugs shall be periodically examined and replaced or repaired if damaged or worn out.

4.1.19 Unprotected electrical cords shall not be routed underneath rugs, mats or other items that could cause or hide damage to the cord. Cords should be tied down/fastened in cable trays or fixed routed were possible.

4.1.20 Stairways with more than four steps shall have handrails which shall be used by personnel using these stairs. The steps shall have slip-resistant surfaces.

4.1.21 Climbing and access to elevated locations shall only be attempted using ladders, step stools or specially designed devices and in line with Working at Height YAN-OMS-316.09 requirements. Chairs, desks, open drawers or office furniture are not to be used as a substitute.

4.1.22 Trip hazards (including temporary ones) created by electrical/telephone/computer cords or loose materials shall be prevented or otherwise be guarded and where possible routed to avoid creating unnecessary tripping hazards. All cords shall be securely taped down unless they are the type specifically designed to lay flat and be walked upon.

4.1.23 Spills shall be cleaned or provided with temporary barriers as soon as possible to prevent traffic through the area until the walking surface can be cleaned up.

4.1.24 Trash/waste shall be separated as much as possible, disposed of in designated containers and recycled where possible.

4.1.25 Office furniture layout should be such that adequate space is left for employees to pass freely between items of furniture and equipment. Ergonomics shall be considered for selecting office furniture.

4.1.26 The effects of using Visual Display Terminals (VDT) and computers for long durations should be well understood and adequate breaks should be considered for such activities.

4.1.27 Smartphones, tablets and documents should not be read while walking.

Every interior door should be labeled with the function of the room. If it is an exit or on an exit route, it should be identified as such. If the room is an official 'safe haven' or safe assembly area, this should be identified. The label can be placed either on or adjacent to the door as long as the identification is clear and unambiguous.

4.1.28 Smoking in offices/buildings is strictly prohibited in all areas other than specific designated locations. (Refer to Attachment 7 for designated smoking area permit).

4.1.29 File cabinets with a potential for tipping when two or more drawers are opened simultaneously based on cabinet layout should be secured from tipping by following the manufacturer's guidance during installation and use. Additional precautions such as bolting to the adjacent cabinet or to the wall may also be used.

4.1.30 Objects with sharp points such as scissors, letter openers or knives shall not be stored with the cutting edge exposed to accidental contact.

4.1.31 It is not allowed to take home any company property without the written agreement of a manager or supervisor (even if it is only temporary).

4.1.32 All incidents, accidents and plant emergencies shall be immediately reported, and employees shall take actions as per their role statements/job classification.

4.1.33 Portable cabins/offices shall undergo Management of Change process as mandated by OMS-317. In addition, proper approval permit shall be acquired. (Refer to Attachment 12)

4.1.34 Portable cabins/offices shall be inspected on monthly basis by area owner to ensure all EHSS requirements are met and maintained. (Refer to attachment 14)

4.1.35 Storage container used by Yanpet Operation or Maintenance shall be inspected on monthly basis by area owner. (Refer to attachment 17)

4.2 General Plant EHSS Rules

4.2.1 Entry of personnel and vehicles to the operating plant shall be restricted and controlled with consideration to applicable Security Standards YAN-OMS-3112 requirements.

4.2.2 EHSS rules for visitors shall be available. Visitors shall be issued or familiarized with the plant EHSS rules before entering the plant area.

4.2.3 Visitors shall not be permitted plant access unless accompanied by YANPET personnel.

4.2.4 Visitor/Escort Acknowledgement Form must be reviewed and signed by both the visitor and escort prior to plant entry. (Attachment 16)

4.2.5 Visitors shall be issued a visitor's badge for entering the plant areas and shall be instructed to wear the badge at all times while at the plant.

4.2.6 Visitors shall be required to follow the plant access rules and register in the visitor's log sheet for the area visited (Attachment 8)

4.2.7 A vehicle pass should be issued to vehicles permitted to enter plant areas. Only vehicles with a pass, either permanent or temporary, shall be permitted access to the plant areas. This requirement does not include non-motorized vehicles such as tricycles.

4.2.8 All vehicles entering the operating plant shall conform to local traffic law regarding roadworthiness, licensing, insurance and spares.

4.2.9 Vehicles entering the operating plant shall comply with all posted traffic signs, signals and directions.

4.2.10 All personnel entering the operating plant shall comply with dress and Personal Protective Equipment (PPE) requirements in line with YAN-OMS-316.08 requirements. Carrying of lighters, matches, or any other form of ignition within the operating plant shall be strictly prohibited. If it is necessary to take an ignition source onto the plant this shall only be done by following the hot work permit system in line with YAN-OMS-316.10 or with written approval by the concerned Area Manager.

4.2.11 Smoking shall not be permitted in the operating plant except in designated safe locations provided with lighters, ashtrays and fire extinguishers.

4.2.12 Mobile devices, cell phones, smart watches, hearing aids, insulin pumps, step counters and electronic cigarettes shall not be permitted within the operating plant units where potentially explosive atmospheres can occur unless they are certified to be operated in potentially explosive/flammable atmospheres (e.g. ATEX certified). The concerned Area Owner should review requests to use mobile phones and smart watches in the operating plant units considering security aspects or the possibility that their use might distract personnel from their normal work.

4.2.13 Photography and use of video recording devices (including cell phones equipped to take photos or video) within the operating plants shall be strictly controlled.

4.2.14 If photography is used, it shall be treated as a hot work activity requiring permits and gas testing appropriate for the area where the device is to be operated.

4.2.15 All photographs taken shall remain the property of YANPET and under no circumstances shall be loaned, published or allowed into the possession of personnel without the express permission of EHSS or Security Department or the authority assigned the responsibility by the Senior Management. This does not apply to photographs taken by government employees acting within the scope of their official duty.

4.2.16 Appropriate work permits shall be obtained for work inside the operating plant areas.

4.2.17 EHSS precautions and procedures concerning specific operations and jobs shall be followed. All work or task(s) shall be performed according to established procedure and with the designated tools and equipment.

4.2.18 All lifting equipment brought into the operating plants, including contractor's equipment, shall have current certifications of examination and testing by a competent examination body.

4.2.19 No person other than Production/Operation Department employees shall be permitted to operate any plant equipment without the prior approval of the concerned Production/Operations Supervisor.

4.2.20 Horseplay or scuffling shall be prohibited.

4.2.21 Running inside the plant should be prohibited, except in case of emergency.

4.2.22 The use of open flame or tools/equipment that produce sparks or electrical arcs shall be prohibited in operating areas unless specifically authorized by the applicable permit in line with Work Permits YAN-OMS-316.10.

4.2.23 Oil/chemicals shall be appropriately stored to ensure there are no leakages. Oil/chemical drums shall be tagged as hazardous or non-hazardous in accordance with applicable local/regional/international regulations and applicable standards. Oil/chemical spillage shall be controlled and disposed for recycling.

4.2.24 Employees shall be made aware of the location of fire extinguishers in the work areas and how to use them. Portable fire extinguishers shall be used by employees for initial stages of firefighting only.

4.2.25 The use of firewater hydrants and hoses for non-emergency purposes shall be in accordance with Emergency Response Equipment Interruption & Authorized Use of Emergency Equipment for Non-emergency Purpose Standard YAN-OMS-319.04.

4.2.26 Employees who are not assigned emergency response or departmental duties shall not congregate in an emergency area.

4.2.27 Firearms and ammunition shall not be permitted on operating plants, with the exception of those carried by law enforcement officers.

4.3 Life Saving Rules and EHSS Non-Compliance Notification

4.3.1 YANPET Life Saving Rules (LSR) (Attachment 13) aim to help employees and contractors to understand and recognize the hazards and comply with these rules covering life critical activities that are undertaken during operations

4.3.2 During the COVID-19 pandemic, violations to precautions set by Yanpet to prevent the virus spread such as; mask wearing, social distancing, not declaring symptoms or contact with suspect or confirmed cases, and other precautions; is considered an LSR violation.

4.3.3 EHSS non-compliance notification (Attachment 15) shall be issued against any department not complying with EHSS requirements that are not considered as a life saving rule.

4.3.4 LSR and EHSS non-compliance notifications shall be tracked by EHSS department and presented in EHSS Steering Committee Meeting.

4.3.5 Original copy of EHSS Non-Compliance Notification shall be kept with EHSS Department and scanned copy sent to concern Unit/Department.

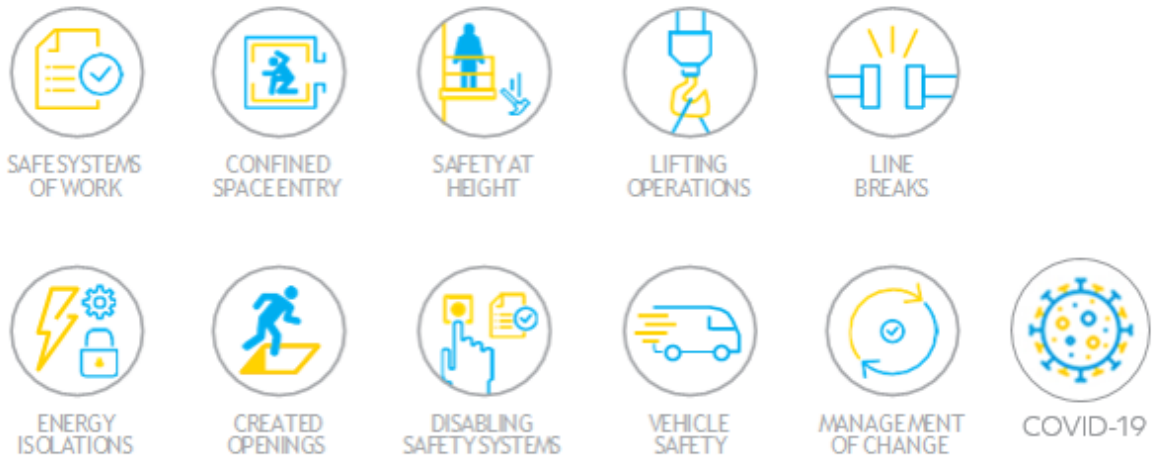

Figure 1 - YANPET Lifesaving Rules

4.4 Traffic EHSS Rules

4.4.1 Driver Selection and Qualification

4.4.1.1 Before being allowed to operate a motor vehicle, drivers shall have a valid driver's license acceptable to local traffic regulations for the class of vehicle that he has been assigned or will be assigned to operate. In addition, any restrictions contained in that license must be complied with.

4.4.1.2 Drivers of YANPET vehicles should be able to speak and read sufficiently to converse with the general public, read and understand highway traffic signs and signals, respond to official inquiries, and make entries on reports and records.

4.4.1.3 When the Company plans to hire new employees or to transfer existing employees into jobs for which driving a motor vehicle is the primary function, individuals should be selected who can be expected to drive safely. Final selection should be based upon analysis of: driving experience and driving record, knowledge test, driving skills test, and physical examination.

4.4.2 Driver Training and Re-qualification

4.4.2.1 Each driver should pass the knowledge test and the skills test at least every 24 months and before returning to work following any significant/relevant impairment due to physical or mental injury or disease unless specified differently in local regulations.

4.4.2.2 Each driver's driving record should be periodically reviewed. The review shall determine whether the driver continues to meet the minimum requirements for safe driving or is disqualified. The review will include consideration of any evidence that the driver has violated applicable laws or regulations or has exhibited a disregard for the safety of fellow employees or the public. This periodic review shall be documented in the employee's file.

4.4.2.3 Drivers will immediately report any changes in their driving status (e.g. restrictions to or loss of driver's license, accidents, and medical restrictions influencing safe driving to their Manager.

4.4.3 Wearing seat belts shall be mandatory for the driver and passengers. This shall apply to all company-owned or leased vehicles and vehicles entering YANPET Facilities.

4.4.4 Vehicles shall conform to the applicable local/regional laws regarding roadworthiness, licensing, insurance, spares and EHSS equipment.

4.4.5 Vehicle Inspection

4.4.5.1 Drivers should visually inspect their motor vehicles before use each day.

4.4.5.2 Vehicles shall not be operated with defects that impair safe operation, such as malfunctioning brakes or worn tires.

4.4.5.3 A 'Danger - Do Not Operate' tag should be attached to the steering wheel of any motor vehicle deemed unsafe to operate, and the location of the vehicle should be immediately reported to the supervisor and the Maintenance Department.

4.4.6 Traffic signs, as applicable, shall be posted within YANPET Facilities.

4.4.7 The maximum permitted speed limit within YANPET is 30 km/h. exceeding the speed limit is strictly prohibited. In case of emergency, the maximum allowed speed for Fire trucks and Ambulances is 50 km/h. Emergency vehicles are exempted from speed limits during any emergency.

4.4.8 All posted traffic control signs shall be adhered to.

4.4.9 The maximum number of passengers to be carried in the vehicle shall be in accordance with the design seating as per the class of the vehicle.

4.4.10 Passengers of vehicles shall not enter or exit vehicles whilst in motion.

4.4.11 Unless specifically designated for this purpose, motor vehicles should not be used to push or pull other vehicles.

4.4.12 When visibility is limited, flagmen should be used or other appropriate precautions shall be taken to ensure that backing of motor vehicles can be done safely.

4.4.13 Headlights should be turned on any time there is insufficient visibility to see pedestrians or other vehicles.

4.4.14 Preventive Maintenance

4.4.14.1 Regular maintenance should be carried out and all oil leakages shall be addressed immediately.

4.4.14.2 Maintenance or other responsible department shall ensure that each motor vehicle is included in a preventive maintenance program designed to ensure the vehicle remains in a safe operable condition, and that preventive maintenance is performed on schedule. Vehicle-specific maintenance records shall be generated and maintained for a period of at least the life of the vehicle within the Site.

4.4.14.3 Maintenance or other responsible department should provide the Owning Department with advance notice of scheduled preventive maintenance to minimize avoidable operational problems.

4.4.14.4 The Owning Department should establish internal procedures to ensure that all department vehicles are maintained in a safe condition, all controls and safety devices are fully functional, and that all vehicles are inspected and repaired as required.

4.4.15 Vehicles shall not be left unattended while the engine is running.

4.4.16 Vehicles shall be parked in REVERSED except for designated areas on road side where bumper to bumper parking is allowed. It will help users to exit easily from the site in case of an emergency.

Exception – If site having approved parking on road side, it is well marked on specific road, then bumper to bumper vehicle parking is allowed.

4.4.17 Vehicles shall be parked and/or loaded and unloaded in designated spaces and areas only.

4.4.18 Vehicles shall not be parked within 15 feet (approximately 5 m) of fire hydrants, in driving lanes or at entrances/exits to parking lots or buildings.

4.4.19 Drivers who must wear corrective lenses or contact lenses shall wear the lenses at all times while driving.

4.4.20 Drivers who must wear hearing aids in order to meet the hearing requirements shall wear these hearing aids while driving.

4.4.21 No driver shall operate a motor vehicle, and the Company shall not require or permit a driver to operate a motor vehicle, while the driver's ability or alertness is so impaired, or likely to become so impaired as to make it unsafe for him to begin or to continue to operate a motor vehicle. Examples of causes of such impairment are fatigue, or illness.

4.4.22 Drivers are required to drive defensively and courteously.

4.4.23 Owners have the responsibility to inspect and maintain their tricycle in good condition.

4.4.24 Tricycle shall only park in designated areas and owner is responsible to facilitate parking.

4.4.25 End user shall visually inspect the tricycle prior to use.

4.4.26 Parallel movement with other vehicles while using tricycles on the road is prohibited.

4.4.27 Speed shall be reduced when approaching curves and graded areas.

4.4.28 Tricycles shall not be used if not equipped with reflective tape/lights on its rear, front, and both sides.

4.4.29 Riding in non-authorized area (i.e 6th ave for tricycles) is prohibited.

4.4.30 Do not alter or modify tricycles in any way that could weaken its structural integrity.

4.4.31 Equipment or other loose objects that may hinder the driver or any passenger in motor vehicles shall be secured with restraint cords/ropes or other devices.

4.4.32 Drivers shall not use mobile phones for conversations while operating a motor vehicle on company business without a hands-free device, irrespective of local regulation. It is strongly recommended to use a mobile phone only when the vehicle is not in motion. Avoid initiating phone calls while driving, postpone incoming calls or keep them short and simple.

4.4.33 Drivers shall not create, send, or read text messages or e-mails using a mobile phone or other electronic device at any time while operating a motor vehicle.

4.4.34 All privately owned vehicles operated on company business shall be compliant with applicable local regulations (seatbelts for all occupants as a minimum).

4.4.35 Heavy vehicles (as defined by local traffic regulations) shall have an alarm that sounds when reversing. A signalman shall direct any heavy vehicle while reversing if visibility is obscured.

4.4.36 Transporting Cargo

4.4.36.1 Cargo shall be loaded and secured to prevent it from sliding, shifting, or falling.

4.4.36.2 If the load extends 4 feet (approximately 1.2 m) or more beyond the body of the vehicle, a red flag or cloth at least 12 inches (0.3 m) (two dimensions) or reflective lights or other type of warning lights should be provided at the extreme rear end of the cargo to provide greater visibility. No cargo should extend over the sides.

4.4.36.3 Load-securing equipment (e.g. ropes, chains, chocks, straps, wire) shall be visually inspected before use to ensure that it is free of defects and in good operating condition.

4.4.37 Motorized Vehicle Entry into Hazardous Areas

4.4.37.1 Entry into plant shall be restricted.

4.4.37.2 A system for approval of vehicle entry inside the plant shall be established.

4.4.37.3 Barricades shall be erected and signs shall be conspicuously posted where entry of vehicles into process or storage areas is prohibited, or prohibited without an approved vehicle entry permit.

4.4.37.4 Motorized vehicles entering within the operating plant areas shall be fitted with spark arresters and valves or similar air-intake cutouts unless a vehicle entry permit from the concerned plant Operations/Production department is obtained and appropriate gas testing is performed where necessary.

4.4.37.5 Requests made for temporary closure of roads must undergo Road Block Permit process and obtain all required approvals (Refer to Attachment 10).

4.4.37.6 All vehicles shall only travel on designated roads. Vehicles are not permitted to travel or cut across dirt or graveled open areas or medians. Roads that are temporarily closed using barricades and signs shall not be traveled upon. Vehicles are not permitted to enter operating areas without proper authorization.

4.4.37.7 Smoking shall be prohibited inside all vehicles entering or operating inside the fenced area of the operating plant.

4.4.37.8 If the emergency alarm is sounded, all motorized vehicles operating within the plant shall be parked so as not to obstruct the roadway and shall be switched off.

4.4.37.9 Vehicles other than emergency vehicles such as fire trucks or ambulances shall not be driven in the plant if the alarm has sounded.

4.4.38 Accident Reporting/Investigation

Motor vehicle accidents shall be reported in accordance with YAN-OMS-318: Incident Reporting, Classification, and Investigation & Analysis. It shall be ensured that:

4.4.38.1 Drivers of company vehicles immediately report vehicle accidents, whether they occur on-site or off-site. This notification shall be made by the most timely and appropriate means (e.g. telephone, radio or messenger).

4.4.38.2 Drivers do not leave the incident site unless there is an emergency need. Drivers shall take all necessary precautions at the scene to prevent additional accidents at the scene.

4.5 Housekeeping

4.5.1 Work environments shall be maintained in a manner that is neat, orderly, and free from tripping hazards or oil spillage. The following good housekeeping practices shall be followed:

4.5.1.1 Tripping hazards such as trash, waste paper basket containers, telephone lines, power cords, air lines, furniture, rope, hoses, or pallets shall not obstruct employee walkways, emergency exits or stairs. If such a practice is unavoidable, proper barricades and covering of the hazard shall be provided.

4.5.1.2 Evacuation routes shall be displayed.

4.5.1.3 The minimum walkway width shall meet applicable local/regional/international standards/regulations or requirements. In the absence of any local/regional/international standards/regulations, it shall be 44 inches (approximately 112 cm).

4.5.1.4 Trash, scrap, and debris shall not be allowed to accumulate. Arrangements shall be made for its disposal to keep the accumulation to a minimum. Protruding nails and other sharp objects shall be removed or bent over in such a manner that they no longer present a risk.

4.5.1.5 Identified containers shall be provided for different types of trash and scrap.

4.5.1.6 Trash and scrap shall be recycled, whenever possible.

4.5.1.7 Materials and/or equipment shall be placed back in storage when the job for which they were used is complete.

4.5.1.8 Material and equipment shall not be stored, parked or left in a manner that obstructs access to fire extinguishers, firewater/gas valves, electrical switches, emergency showers/eyewashes, etc.

4.5.1.9 Storage shelving, racks, cabinets, files, etc. shall be anchored and secured in a manner to prevent tipping over.

4.5.1.10 Machinery-related spills (e.g. oil, dust, metal shavings, hydraulic fluids) onto walkways and working surfaces shall be prevented with the use of collection bags, drip pans, splash guards or other effective means. Spills shall be immediately cleaned and disposed of properly.

4.5.1.11 Potentially flammable and combustible materials shall be placed back in approved storage cabinets at the end of each shift or when not in use. Compressed gas bottles/cylinders shall be removed from the work area and placed in their approved storage location at the end of each shift or when not in use.

4.5.1.12 Good housekeeping practices shall be followed. Personnel shall ensure that at the end of each shift, work areas and break areas are neat and orderly.

4.5.1.13 Floors of work environments shall be maintained clean and oil-free. Additionally, repair requests shall be prioritized in a manner that places the greatest emphasis on reducing the level of employee exposure to hazardous conditions and effect upon the environment.

4.6 Danger, Caution Tags and EHSS Instructional Signs

Tag-out devices and their means of attachment shall be strong enough to prevent inadvertent or accidental removal. Tag-out device attachments shall be attachable by hand or self-locking and be non-releasable, with a minimum unlocking strength as required by the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, the device shall have an unlocking strength not less than 50 pounds and shall have the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

Space shall be provided on the tag or equivalent system to write the name of the person installing the tag, the date of installation and the identification number of the equipment.

The tag or equivalent system should also contain other information such as craft or reason for the tag. Danger tags or equivalent system shall contain site standardized wording in the

local language such as 'Danger-Do Not Operate'.

4.6.1 Danger Signs

4.6.1.1 Danger signs shall be installed at locations where an immediate hazard exists.

4.6.1.2 The sign words shall meet regulatory requirements and be in a language understood by all persons present on the location. The use of English as a second language shall be and shall be readable at a minimum distance of 5 feet (approximately 1.50 m) or a greater distance as warranted by the hazard.

4.6.1.3 Danger signs shall be designed as required by the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, danger signs shall be red as the predominating color for the upper panel, black outline on the borders and a white lower panel for additional sign wording (refer to 316.01-5).

4.6.2 Caution Signs

4.6.2.1 Caution signs shall be installed at locations where it is required to warn against potential hazards or to caution against unsafe practices.

4.6.2.2 The sign words shall meet regulatory requirements and be in a language understood by all persons present on the location. The use of English as a second language shall be considered and shall be readable at a minimum distance of 5 feet (approximately 1.50 m) or a greater distance as warranted by the hazard.

4.6.2.3 Caution signs shall be designed as required by the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, cautions signs shall be yellow as the predominating color, black upper panel and borders, yellow lettering of 'Caution' on the black panel, and the lower yellow panel for additional sign wording. Black wording shall be used for additional wording (refer attachment 316.01-4).

4.6.3 Safety Instructional Signs

4.6.3.1 Safety instructional signs shall be installed at locations where permanent safety requirements need to be communicated, e.g. safety rules, Personnel Protective Equipment required.

4.6.3.2 The sign words shall meet regulatory requirements and be in a language understood by all persons present on the location. The use of English as a second language shall be considered at Entity level, and shall be readable at a minimum distance of 5 feet (approximately 1.50 m) or a greater distance as warranted by the hazard.

4.6.3.3 Safety instructional signs shall be designed as required by the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, safety instructional signs shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign shall be black letters on the white background (refer to attachment 316.01-2).

4.6.4 Accident Prevention Tags

4.6.4.1 Accident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc. Accident prevention tags such as Do Not Operate tags, Danger tags and Caution tags shall be developed and made available to the production/operations department employees.

4.6.4.2 A 'Do Not Operate Tag' shall be designed in line with applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, it shall be a white tag having a red square with 'Do Not Operate' written in white letters (refer to attachment 316.01-3).

4.6.4.3 A 'Danger Tag' shall be designed in line with the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, it shall be a white tag having a black square with a red oval in which 'Danger' written in white letters (refer to attachment 316.01-1).

4.6.4.4 'A Caution Tag' shall be designed in line with the applicable local/regional/international standards/regulations requirements. In the absence of any local/regional/international standards/regulations, it shall be a yellow tag having a black rectangle with 'Caution' written in yellow (refer to attachment 316.01-1).

4.6.4.5 Installation and removal of tags is restricted to company personnel, and they shall only be installed or removed by or under the authority of the person having immediate supervision over the equipment or system being tagged.

4.6.4.6 Tags shall be dated and signed in the designated places prior to installation. A statement as to why equipment is not to be operated shall be noted on danger tags.

4.6.4.7 Special instructions covering operation of equipment is to be noted on reverse side of the 'Caution' tag. These instructions may relate to allied equipment as well as items tagged. Due to space limitations, the notation on the tag may simply be 'Refer to special instructions obtainable from supervision'.

4.6.5 Placement of Tags

4.6.5.1 All Caution or Danger tags shall be numbered.

4.6.5.2 A separate log sheet (Attachments 4, 5, &6) containing the following information shall be completed for each situation involving the placement of tags:

a. Identity of the equipment or area being tagged

b. Purpose of the tag and pertinent precautionary information

c. Date and number of tag

d. Name of supervisor ordering placement and name and signature of person placing the tag

4.6.6 Control and Review

4.6.6.1 Information concerning temporary tags shall be maintained at the appropriate control room or outside work shelter.

4.6.6.2 All active temporary caution and danger tags shall be reviewed weekly by shift personnel and shall include:

a. Verification that caution tags are in place and the need is still valid

b. Notification to the authorizing supervisor and/or appropriate staff member when a tag has been in place more than two months

4.6.7 Removal

4.6.7.1 Tags should be removed by operation/production personnel when the need is no longer deemed pertinent by the operations supervisor.

4.6.7.2 Removal of the tag shall be documented on the same card/log as was used for recording the initial information.

4.7 Site Illumination

4.7.1 The lighting system of YANPET is designed for safe and efficient operation and maintenance of the plant.

4.7.2 The Primary purpose of adequate lighting is to ensure that tasks are carried out safely and accurately. Site management shall determine adequate lighting. The site has been surveyed as per attachment 316.01-18-Illumination survey.

4.7.3 Monitoring values shall meet SABIC Standard for Illumination Levels attachment 316.01-19. The installation and monitoring values shall meet a level appropriate for the conditions of the specific task.

4.7.4 YANPET has established and executed a periodic illumination monitoring strategy to ensure compliance with applicable local regulations/standards for workplace illumination levels. The monitoring instrument shall be calibrated before use as per the manufacturer's recommendations.

4.8 Legal and Regulatory Requirements

There is no applicable local, national, and state/regional regulations and requirements applicable to this management system.

4.9 Control of Records

The following record control requirements are required in accordance with Documentation & Control of Records Standard (YAN-OMS-234).

SN	Documents	Owner	Location	Retention Period
1	Safety orientation attendance sheet.	EHSS CoE Department	EHSS CoE Department secretary	1 Year
2	Vehicle/Equipment Entry inspection records.	Garage Department	Garage Department	1 Year
3	Traffic violation/citation records shall be Retained.	EHSS Security	EHSS-Security	1 Year
4	Danger/ Caution Tags Log-sheet shall be retained in the respective operating units.	Operation Departments	Shift Supervisor Office	1 Year
5	Visitor Log-Sheet Shall be retained in the respective operating units.	Operation Departments	Shift Supervisor Office	1 Year
6	New Employees/Visitors Plant gates entry records.	EHSS Security	EHSS-Security	1 Year
7	Storing Chemicals in Offices form shall be kept with the owner.	All Departments	All Departments Secretary	Always
8	LSR & Non-Compliance Notification	EHSS Safety Department	EHSS Portal	3 Years

5 COMPETENCY

Competency matrix is developed in accordance with Training & Competencies Standard (YAN-OMS-131). The matrix identifies the key skills and knowledge required to successfully implement this management system. These competencies are mapped to critical functional roles within the organization structure.

Competency color	Type	Site Management Team	Plant Management Team	EHSS	Operation Employees	Maintenance Employees
General plant EHSS and Life Saving Rules		D	D	D	D	D
Office safety		D	D	D	D	D
Driving safety		-	-	D	D	D
Application of tags and signs aligned with safe work practices		-	D	P	P	P

Table 5.1 - Competency Matrix

Competency Types:		Core		Leadership		Functional
Proficiency Levels:	D	Developing	P	Proficient	A	Advanced

6 CONTINUAL IMPROVEMENT

6.1 To promote continual improvement in the application of this management system, the following key performance indicators (KPI) to assess performance are mandated in line with Business Performance Standard (YAN-OMS-211). The minimum expected results to be achieved are:

6.1.1 % Reduction in category A, B, C and D of incidents for this sub element on yearly basis.

6.2 A monthly compliance assessment to review performance against this management system and the results of these reviews shall be used as input to YANPET Continual Improvement Plans in accordance with Continual Improvement Framework Standard (YAN-OMS-511).

6.3 Statistical tools shall be used to analyze the performance of this management system in accordance with Problem Solving Tools & Techniques Standard (YAN-OMS-522).

6.4 Management system leader shall document, track and report performance improvement, as well as any associated corrective and preventive actions, and then communicate these appropriately to organization personnel and stakeholders on a regular basis.

7 REFERENCES

1 OSHA 29 CFR 1910.144

2 OSHA 29 CFR 1910.145

3 SHEMS 08.01

7.1 Links with Other YAN-OMS Standards

Input	Interface / link	Output
YAN-OMS-111	Leadership commitment and culture.	YAN-OMS-316.01
YAN-OMS-122	Objective setting and management system Leader responsibilities. Formation of relevant (sub-) committees and periodic meetings.	YAN-OMS-316.01
YAN-OMS-131	Request for identification and communication of the necessary training requirements relating to this YAN-OMS standard.	YAN-OMS-316.01
YAN-OMS-231	Management system development guidelines. Clarification, variance and exemption process to be followed.	YAN-OMS-316.01
YAN-OMS-232	Compliance assessment expectations	YAN-OMS-316.01
YAN-OMS-234	Documentation and record keeping requirements.	YAN-OMS-316.01
YAN-OMS-316	Minimum expectations for the management system Leader on updates, action follow up, communication and reporting.	YAN-OMS-316.01
YAN-OMS-316.01	Communicate identified training requirements for this management system.	YAN-OMS-131
YAN-OMS-316.01	Communicate all requested data/information for alignment within YAN-OMS-316 committee.	YAN-OMS-316

Input	Interface / link	Output
YAN-OMS-316.01	Send reported incidents for overall program improvement opportunities.	YAN-OMS-318
YAN-OMS-316.01	Carrying Firearms and Ammunition at operating plants.	YAN-OMS-3112
YAN-OMS-316.08	PPE requirements.	YAN-OMS-316.01
YAN-OMS-316.09	Minimum requirements regarding climbing and access to elevated locations.	YAN-OMS-316.01
YAN-OMS-316.10	Work permit requirements for carrying out maintenance work.	YAN-OMS-316.01
YAN-OMS-316.11	Electrical isolation requirements for carrying out maintenance work.	YAN-OMS-316.01
YAN-OMS-317	MOC process to be followed in case of changes.	YAN-OMS-316.01
YAN-OMS-318	Identification of Class A, B and C incidents related to general EHSS rules.	YAN-OMS-316.01
YAN-OMS-319.04	The allowed use of firewater hydrants and hoses for non-emergency purposes.	YAN-OMS-316.01
YAN-OMS-3110.01	Provision and testing of emergency lighting.	YAN-OMS-316.01
YAN-OMS-3112	Requirements related to controlling the entry of personnel and vehicles to the operating plant.	YAN-OMS-316.01

Table 7.1 - Interfaces and Linkages

7.2 Glossary, Formulae & Definitions

Glossary	Definition
Life Saving Rules (LSR)	Life Saving Rules cover life critical activities that are undertaken during operations, aiming to help employees/contractors to recognize the associated hazards and comply with these rules for preventing any incidents, injuries or unwanted situations.

8 APPENDICES

No.	Attachment No.	Attachment Title	Attachment Form
1.	316.01-1	Danger and Caution Signs	Att. 316.01-1.docx
2.	316.01-2	Safety Instructional Signs	Att. 316.01-2.docx
3.	316.01-3	"Do Not Operate", "Danger" and "Caution" Tags	Att. 316.01-3.doc.docx
4.	316.01-4	"Caution" tags Log Sheet.	Att. 316.01-4.docx
5.	316.01-5	"Danger" tags Log Sheet.	Att. 316.01-5.docx
6.	316.01-6	"Do not Operate" tags Log Sheet.	Att 316.01-6.docx
7.	316.01-7	Designated Smoking Area Permit.	Att 316.01-7.docx

8.	316.01-8	Visitor Log Sheet	 Attachment 316.01-8.docx
9.	316.01-9	Office Chemical Storing Form	 Attachment 316.01-9.docx
10.	316.01-10	Road Block Permit	 Road Block Permit.doc
11.	316.01-11	Driving Authorization Request Form	 Att. 316.01-11.doc
12.	316.01-12	Area Allocation permit	 Att. 316.01-12.xlsx
13.	316.01-13	LSR Violation Notification and Investigation Form	 Att 316.01-13.docx
14.	316.01-14	Temporary Office, Portable Cabin, & shelters Installation/Monthly Inspection Checklist	 Att. 316.01-14.docx
15.	316.01-15	EHSS non-compliance notification	 Att 316.01-15.docx
16.	316.01-16	Visitor/Escort Acknowledgement Form	 Att 316.01-16.docx

17	316.01-17	Storage Container Inspection Form	Att 316.01-17.docx
18	316.01-18	Illumination survey	Sabic Yanpet 2013 Illumination Survey-
19	316.01-19	SABIC Engineering Standard SES E20-E02	SABIC Engineering Standard SES E20-E(
20	316.01-19	SABIC Standard for Illumination Levels	SABIC Standard for Illumination Levels.c
21	316.01-20	Illumination Survey Form	ILLUMINATION SURVEY FORM.doc