



KHNP Supply Chain Management for Poland Nuclear Industry Suppliers

*60th International Scientific Welding Conference
Sosnowiec, Poland*



17 October 2018

Victor KUM





CONTENTS

*Basic
Concept*



*Future
Cooperation*



*Qualification
Process*



Basic Concept

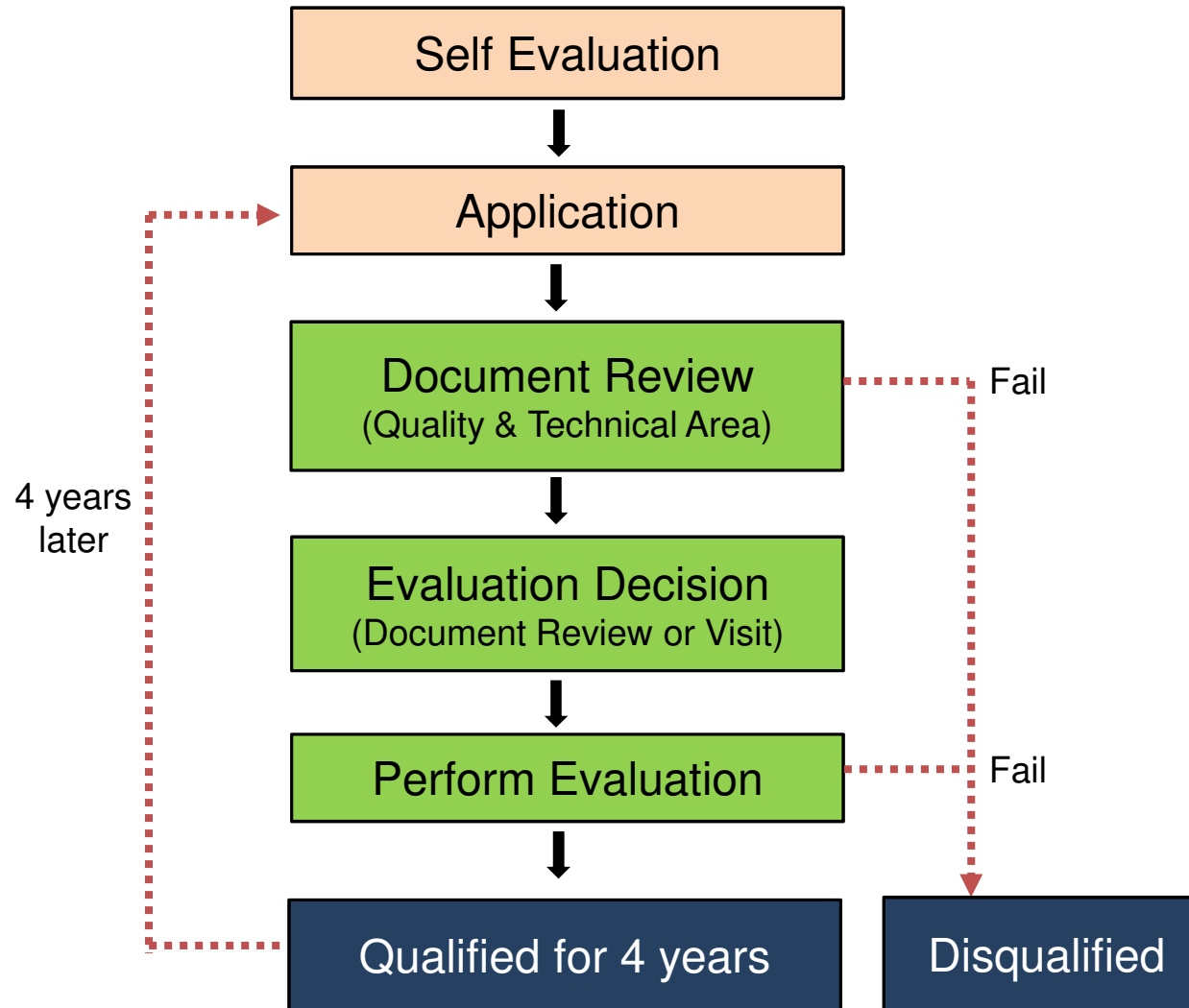
Category for suppliers

<i>Category</i>	<i>Supply Area</i>	<i>Equipment</i>
<i>Major Equipment</i>	<i>Construction</i>	<i>RV, SG, RCP, TG, etc.</i>
<i>BOP</i>	<i>Construction</i>	<i>Valve, Pump, Cable, etc.</i>
<i>Spare Part</i>	<i>Maintenance</i>	<i>Valve, Pump, Cable, etc.</i>

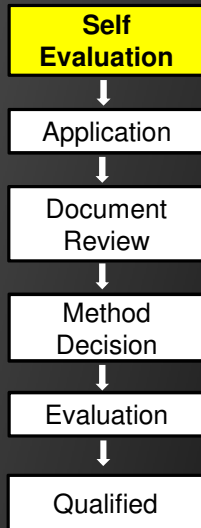
- ***KHNP works with more than 900 qualified suppliers (as of 2018)***

Qualification Process

Whole Qualification Process



Qualification Process



Self Evaluation by Supplier

QA Manual Check List Q Class

(If necessary, Please refer ASME NQA-1(1994))

Name of Company :

QA manual approved date :

Rev. No :

Document No :

No.	Quality Assurance Requirement	Related Contents in the Quality Assurance Manual	Remarks
1	Organization		
2	Quality Assurance Program		
3	Design Control		
4	Procurement Document Control		
5	Instruction, Procedure, Drawing		
6	Document Control		
7	Control of Purchased Items and Services		
8	Identification and Control of Items		
9	Control of Processes		
10	Inspection		
11	Test Control		
12	Control of Measuring & Test Equipment		
13	Handling, Storage and Shipping		
14	Inspection, Test and Operating Status		
15	Control of Nonconforming Items		
16	Corrective Action		
17	Quality Assurance Records		
18	Audits		

Note. In the Remarks column, explain the reason why if you have not applied to requirement.

[양식번호 : 표준행정-9029B-6-1/4]

QA Manual Check List Q Class(Detail)

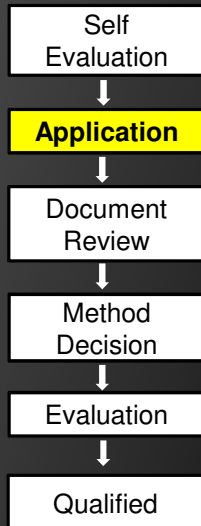
Quality Assurance Requirement(Detail)	Related Contents in the QA Manual	Remarks
1. Organization		
1) Responsibility for establishing, implementing and verifying of QA program		
2) Organizational structure, functional responsibilities and authorities		
3) Responsibility for audit, inspection		
4) Organizational freedom for quality organization (person)		
5) Report to a management level for activities affecting quality		
6) The external and internal interfaces between organizational units		
2. Quality Assurance Program		
1) Establishing and maintaining QA Program		
2) Scope of application		
3) Relationship between QA program and procedure		
4) Personal indoctrination and training		
5) Personal qualification for quality verification and special process		
6) Regular assessment for the adequacy of QA Program		
3. Design Control		
1) Identifying, approval and documentation for design input		
2) Design Process		
3) Design verification		
4) Change Control		
5) Interface control		
6) Documentation and records		
4. Procurement Document Control		
1) Content of the procurement documents (Scope of Work, Technical Requirements, QA Program Requirements, Right of Access, Documentation Requirements, Nonconformances, Spare and Replacement Parts)		
2) Procurement document review		
3) Procurement document changes		
5. Instruction, Procedure, Drawing		
1) Prescription of the activities affecting quality		
2) Quantitative or qualitative acceptance criteria		
6. Document Control		
1) Preparation, review, approval, and issuance		
2) Documented control system		
3) Document Change(major/minor)		

Note. In the Remarks column, explain the reason why if you have not applied to requirement

[양식번호 : 표준행정-9029B-6-2/4]

18 chapters based on ASME NQA-1

Qualification Process



Application for Registration

APPLICATION FOR REGISTRATION ON KHNP'S QUALIFIED SUPPLIERS' LIST

Unless otherwise required, please record only the matters related to the item for application.
Use of additional sheets is permitted, if necessary.

NEW CHANGE RENEWAL

1. APPLICANT'S NAME & ADDRESS

A d d r e s s	Name of Company (full legal name)		Chief Executive Officer	
	Head Office	Zip Code:	TEL:	FAX:
	Factory	Zip Code:	TEL:	FAX:
	Factory	Zip Code:	TEL:	FAX:
	Contact Person In Korea	Postal Code:	TEL:	FAX:

2. ITEM TO BE REGISTERED

Item Description	Quality Class
Field of KHNP Operation	Electrical Generation (Hydraulic <input type="checkbox"/> Nuclear <input type="checkbox"/> Common <input type="checkbox"/> Telecommunications <input type="checkbox"/> Electronic Data Processing System <input type="checkbox"/> Other <input type="checkbox"/> CGID <input type="checkbox"/>)
Referenced Purchase Spec. No.	

3. BUSINESS INFORMATION

Type of Business	Design <input type="checkbox"/> Manufacturing <input type="checkbox"/> Assembly <input type="checkbox"/> Distribution <input type="checkbox"/> Other <input type="checkbox"/> (please explain)
Type of Company	Corporation <input type="checkbox"/> Proprietorship <input type="checkbox"/> Other <input type="checkbox"/> (please explain)
Major Products (Please record percentage of your Total Sales Amount)	1. (%) 2. (%) 3. (%)

NOTE:

- As per Korean Law, a Certificate of Taxpayer's Registration (for foreign applicants, an equivalent certificate) shall be attached to the application.
- In the event that the applicant is a distributor, a notarized contract for exclusive Korean distribution rights with the manufacturer shall be attached hereto, along with any pertinent information on the manufacturer so as to enable us to assess his capabilities.
- In the event that the applicant is a design company, information on the companies that manufacture major items, or assemble and test the system, shall be attached so as to enable us to assess their capabilities.

[양식번호 : 표준행정-9029B-4-1/9]

21. LIST OF THE CERTIFICATES OF AUTHORIZATION FOR OFFICIAL STANDARDS

AND/OR QUALITY ASSURANCE SYSTEMS

Description	Authorizing Organization	Effective Period	Certified Items	Address of Certified Shop

Note: Copies of each certificate shall be attached hereto.

22. STATUS OF APPROVAL, PERMIT, LICENSE, REGISTRATION, AND/OR REPORT UNDER

THE LAW AND/OR ORDINANCES (Applicable only for Domestic Applicants)

No.	Description	Date Acquired	Approving Organization	Remarks

Note: Copies of any related documents for identification purposes shall be attached hereto.

23. STATUS OF ESTABLISHMENT OF A QUALITY ASSURANCE SYSTEM

Has a QA System been established?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Date of Establishment	
Applied Code & Standards for QA System			
Have external audits for QA System been performed? Yes <input type="checkbox"/> No <input type="checkbox"/>	Auditing Organization	Audit Date	Remarks

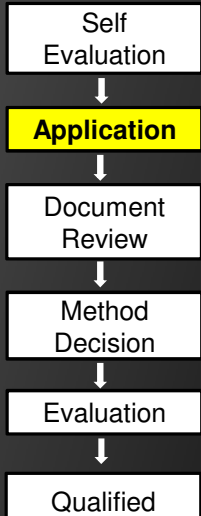
Notes:

- In the "Remarks" column, the reason for the audit shall be indicated.
- The QA System (or Program) Manual in use shall be attached hereto.
- KHNP's "QA Manual checklist" shall be attached hereto. (from KHNP's Form)

[양식번호 : 표준행정-9029B-4-8/9]

24 categories for supplier's information and capability

Qualification Process



Application for Registration

K-pro KHNP Procurement System
한국수력원자력 전자상거래시스템

아이디로그인 | 인증서로그인
아이디: [입력] 비밀번호: [입력] 로그인
회원가입 | ID/PW찾기 | 인증서관리

빠른연결 | 입찰사전준비 (GO)

- 입찰등록/변경 안내
- 입찰서제출
- 등록회원 지문등록 현황
- 계약이행보증금(증권) 납부
- 계약체결 | 주문서 접수
- 물품 접수요청
- 가설/중공요청
- 세금계산서 제출
- 메외입찰신청

계약이행보증금 신청 | 실적증명서발급 신청

계약담당자 문의처 (GO)

***이용안내, 전산장애 문의**
054-622-2579
운영시간: 평일 09:00-18:00, 토/일/공휴일 제외
e-고객지원센터 1:1 문의하기 (GO)

입찰/계약 이의제기 (GO)

부패행위 | 한수원 직원 부패행위 일제 신고전화 | 산업부 감사관실 ☎044-203-5412
관련 법률에 의거, 신고자 비밀은 철저히 보장됩니다.

Q&A | FAQ | 매뉴얼 | 규정·서식 | 자료실
계약규정 | 제계약 사전알림

프로그램 설치안내 (GO)

관련사이트 | 검색해 주세요

업체정보 | 입찰참가 | 수의사담/견적제출 | 계약체결 | 계약사후관리 | 2017.04.24 02:11:51

입찰사제출 | 적격심사 접수입력 | 전자입찰서류함

POP Zone | 협력업체 품질등급평가 | 셀프모니터링 | 상세보기

청정기술, 무대 Zero! Clean 한수원

청정계약협약

퇴직자 재취업 현황

계약정보공개

상시공개 수의계약품목

- 신재생에너지 문서 제출
- 한수원 퇴직자 등록
- 주기기 납품서 제출
- 외자선적서 제출

(新) 유자격 공급자 등록

(舊) 유자격 공급자 등록

모의 입찰

실적증명 발급문서 확인

연간발주계획안내(17년)

- 신한올 1,2 호기 보조기기 구매 공경표

PMS | 하도급대금지급확인시스템

- 기자재제작품질관리시스템
- 시정조치보고서관리시스템
- 품질증빙서류관리시스템

입찰공고

낙찰(예정)공고 | 적격심사공고

수계약사전공고 | 규격서 사전공고 | 발주계획 사전공개 | 기타사전공고

입찰공고

- [구매] 서버 외 2품목(설치 및 성능시험조건부) [17.04.21]
- [구매] 한울3발 차단기 1EA 1품목(G등급) [17.04.21]
- [구매] 한울 3발 전동기 1품목(A등급 이상) [17.04.21]
- [구매] 월성 3발 전기톱·계전기 등 4품목 구매 [17.04.21]
- [공사] 고리3발 차체처분참고 신속 전기공사 [17.04.21]
- [용역] [기술계약서 평가결과 공고] 2017년도 이력날 콘텐츠 ... [17.04.21]
- [구매] 가압자카드 8회선 외 17품목 [17.04.21]

수계약사전공고

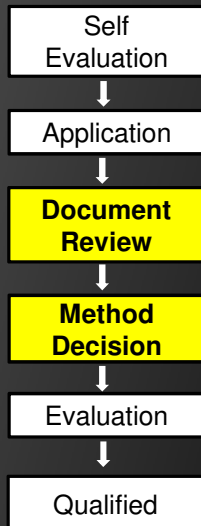
- 고리2발전소 AAC DG 펌프류 정비용 자재 구매 [17.04.21]
- 기본상여금 소송 판결에 따른 2011년도 연말정산 및 4... [17.04.21]
- 고리4호기 증기발전기 A 수실 배수밸브 용접부 결함 분석... [17.04.21]
- 고리2호기 주발전기 여자시스템 정비용 자재 구매 [17.04.20]
- 신월성1,2호기 터빈구동보조급수펌프 예비품 구매 [17.04.20]
- 한빛 3호기 17차 O/H용 외자 구매 [17.04.20]
- 새울1발전소 펌프 Mech. Seal 구매 [17.04.20]

공지사항

- 2017년 한수원 협력사 대상 원자력 품질실무전문교육 시행 ... [2017.04.19]
- 2017년도 한수원 기술이전 사업 안내 [2017.04.06]
- 원자력 품질분야 전문가 멘토링 안내 [2017.03.20]
- 안전등급품목 계약자 수시점검 시행 알림 [2017.03.07]
- 2017년도 한수원 테크노닥터 사업 안내 [2017.02.23]
- 2017년도 한수원 중소기업 이력날 교육 지원사업 안내 [2017.02.21]

K-PRO (KHNP Procurement System) – <http://ebiz.khnp.co.kr>

Qualification Process



Document Review – Two aspect

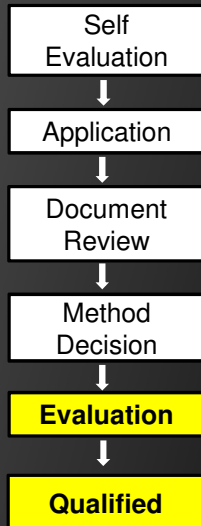
KHNP HQs have document review with two evaluation areas

- 1. Quality area** : Based on ASME NQA-1 (18 chapters)
- 2. Technical area** : Design, Manufacture, Test, Contract Mgt.

Responsible departments perform supplier evaluation

- 1. Visit factory** : major cases
- 2. Document review** : same supply experiences in 3 years

Qualification Process



Quality & Technical Areas

Quality Class	Qualified	Disqualified
Q	<ol style="list-style-type: none"> Score : Higher than 80 No unsatisfactory case among critical question(*) 	<ol style="list-style-type: none"> Score : Lower than 80 More than one(1) unsatisfactory case
A(T,R)	<ol style="list-style-type: none"> Score : Higher than 70 (Technical : Higher than 75) No unsatisfactory case among critical question 	<ol style="list-style-type: none"> Score : Lower than 70 (Technical : Lower than 75) More than one(1) unsatisfactory case

Though ISO9001 is different from ASME NQA-1, it can be adjusted through minor modification

KHNP to review the possibility for changing evaluation criteria to incorporate the European Code & Standard.

Future Cooperation





Dziękuję !

