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COMMERCIAL GRADE DEDICATION PROJECT
FOR
WASHINGTON PUBLIC POWER SUPPLY SYSTEM
CONTRACT NO. C-30298

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1.0 SUMMARY

Cygna Energy Services engineers have evaluated fifty (50) Supply System selected commercial grade dedications as performed by current WNP-2 Procurement Requirements Evaluations (PRE's). The Supply System Evaluations were augmented, as necessary, in order to ensure that the procured items are adequate for their installed application(s). The standard of acceptability was considered to be EPRI-NP-5652, (NCIG-07) and the Final Draft "Guideline for the Technical Evaluation of Replacement Items in Nuclear Power Plants" (TERI).

Of the fifty items evaluated, all but one (1) were determined to be adequate for installation, with the incorporation of additional certification in some instances. Nine (9) items were found to be adequate as dedicated by existing Procurement Requirements Evaluations. Another eleven (11) items were considered adequate through added documentation of post receipt and installation testing. Fourteen (14) others could be reclassified by the Supply System as non-safety related and therefore would not require dedication. An additional fifteen (15) items could be upgraded to current guideline requirements by the Supply System performing additional Commercial Grade Supplier audits and/or obtaining certifications verifying critical characteristics. Cygna recommends that the Supply System perform audits and obtain certifications, as indicated, for these items.

One item was determined to be inadequately dedicated due to incomplete determination and verification of critical characteristics and the authorization of its unrestricted use.

The Supply System technical approach for dedicating safety related items was found to be generally sound. However, the documentation requirements of current guidelines were not met in many cases.

Recent program enhancements by the Supply System should provide for improved vendor selection and documentation in the future.

2.0 DESCRIPTION OF SCOPE PERFORMED

Cygna Energy Services engineers evaluated 50 Supply System selected commercial grade dedications in order to ensure that the items, when installed, would be adequately dedicated for their application. The commercial grade dedications were performed by the Supply System in accordance with Procedure No. 1339, Rev. 2 or earlier.

The review first attempted to determine whether the dedications were consistent with USNRC Generic Letter 89-02, EPRI-NP 5652, "Guideline for the Utilization of Commercial Grade Items in Nuclear Safety Related Applications (NCIG-07)," EPRI, Final Draft, "Guideline for the Technical Evaluation of Replacement Items in Nuclear Power Plants" draft, ASME Section III, ANSI N42.2 and associated daughter standards, 10CFR50.49, USNRC Regulatory Guide 1.97 and other standards or guidance documents as appropriate. These other documents included but were not limited to USNRC I & E Bulletins and Notices, Inspection Reports and Notices of Violations. The Supply System FSAR, QID's, specifications, drawings and procedures were also utilized. The evaluation process is described more fully in Cygna Work Instruction 89162, No. 1 prepared specifically for this scope (see Appendix A).

When the dedication documentation was not complete, Cygna attempted to develop documentation to meet the above guideline requirements. These actions included vendor contact to obtain additional certification, requested specific audits of commercial grade suppliers and researching Supply System documents (e.g. FSAR, Technical Manuals, QID's, EQE memorandums, drawings and procedures).

Classification of the item was also reviewed. If the item could be reclassified as non-safety related, Cygna recommended the Supply System do so and thereby preclude the need for dedication. In some cases the item was supplied by an ESL vendor and consideration of future procurements as a QCI item was suggested.

3.0 RESULTS AND DISCUSSIONS

The Supply System Plant Technical Procurement Review Evaluation Procedure, PPM 1.3.39, Revision 2 and earlier, resulted in some dedications that were quite acceptable and generally in accordance with current NRC and EPRI guidelines. However, other dedications required the specific reference to other Supply System procedures and documents in order to verify critical characteristics. In many cases, vendor certifications were obtained or determined to be available and these should be obtained by the Supply System and added to the procurement documents to meet current EPRI dedication guidelines. Forty percent of the items could be reclassified.

The evaluations of the dedications were accomplished in several steps based on the initial assessment of the completeness of the existing evaluation packages. Each step established the acceptability of a particular population of the 50 items. These steps were discussed in Section 2.0 and the results are discussed below as well as detailed in Table 1. The complete evaluations for all items were previously submitted to the Supply System.

3.1 Adequately Dedicated Commercial Grade Items

Of the fifty (50) items evaluated, nine (9) were determined to be safety related and to have been adequately dedicated by the Supply System. In many cases, these items were relays or switches obtained from approved vendors of the Supply System that were functionally and seismically tested after receipt. These items are specifically identified in Table 1 with a "I" in the right-hand column. In these cases the dedication was specific in identifying verification requirements.

3.2 Post Receipt Documentation Augmented

Another eleven (11) items were found to be dedicated based on additional credit taken for Supply System documentation and/or procedures used in the verification of critical characteristics. Some of these item's critical characteristics were verified through Supply System post-installation testing, and availability and operation testing as described in IEEE 387-1977 (for diesel generators). The documentation of that verification process was not included in the dedication. These items are designated with a "II" in the Table 1.

3.3 Additional Documentation Required

Sixteen (16) items could be dedicated to current guidelines through audits and/or further certification by the vendor. In these cases, critical characteristics of the item or like-for-like certification by the vendor would augment the Supply System dedication. These items are designated with a "III" in Table 1. Six (6) certifications were obtained from Supply System audited vendors and should be added to the procurement documentation files.

Another ten (10) items were identified as being certifiable by the vendor or manufacturer. In some of these cases the Supply System should audit the vendor or manufacturer for supply of commercial grade items. Audits of and certification by Cannon (PRE 300), SKF or ASI (PRE 359) and Amphenol or Almac (PRE 1217) are available and considered necessary to meet current guidelines.

Seven (7) of the items in this category could be procured as Class I items from the same vendor provided certification is obtained from the vendor.

3.4 Non Safety Related Items

Another thirteen (13) items were determined to be non-safety related through Supply System documentation review or performance of an FMEA. An FMEA had been performed in some cases in the PRE and adequately determined the item to be not safety significant. The remaining items required similar analysis which was performed as part of this scope. The non-safety related items are designated by a "IV" in Table 1.

3.5 Inadequate Dedication

In one (1) case, PRE 0774 (designated by a "V" in Table 1) the Supply System dedication of an item was deemed inadequate. In this case, Cannon connector pins P/N 030-9048-004 (Matcode 72105355) which are required to be manufactured to MIL-C-5015 were determined to be inadequate for installation as dedicated. These pins were also procured as GE P/N 159C 4343P007. These items were procured for use throughout the plant from unaudited vendors or manufacturer. Verification of MIL-C-5015 manufacture and electrical attributes would provide dedication of this item for installations specified by design basis documents.

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	MC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion
006	61112352	Air Monitor	Y	308-030	Comparator, spring based diaphram	Air Monitor	Y	Air Monitor	Y	III - Item is adequate for use. - Certification obtained from ESL vendor to meet current guidelines. - Recommend Class I procurement in future.
0093	61113220	Robert Shaw	N	7138	Gage pressure 30"Hg 0-30 psig			Arthur Forsyth Co.	N	IV - Item is adequate for use. - Item is considered non safety related based on FSAR.
0096	58162965	EHD	N	8364237	Pump, water right hand rotation	Stewart Stevenson	N	Coast Engines	Y	II - Item is adequate for use. - Acceptable dedication with Dedication Basis from Evaluation No. 1192 added as well as PPM 1.5.7 credit taken.
0147	58960752	EHD	N	8367720	Oil level gage	Stewart Stevenson	N	EHD	N	IV - Item is adequate for use. - Item used for local indication only and could be reclassified as non-safety related.
0171	81008221	Woodward Governor	CG	9903-029 (8271-011)	Potentiometer assembly, motor operated	Stewart Stevenson	N	Woodward Governor	CG	III - Item is adequate for use. - Certification obtained from CG audited vendor to meet current guidelines.
0300	24208582	Cannon	N	CA-3106HR 10SL-4S	Connector, high temperature	TEC	Y	J&K Supply, Electro Air, Connector World	N N N	III - Item is adequate for use. - Certification by mfg. to MIL-C-5015 is required to meet current guidelines and should be obtained for harsh environment applications. Testing and inspections were performed.
0313	25107845	Salzer Bingham-Willamette	Y	1514105	Screw cap socket head throttle bushing sleeve			Salzer Bingham-Willamette	Y	III - Item is adequate for use. - Vendor supplied as Class I with certification. - Recommend Class I procurement in future.

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	HC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion	
0340	63401765	Leeds & Northrup	CG	067390	Slidewire cover			Leeds & Northrup	CG	- Item is adequate for use. - A FMEA performed indicated item would be non-safety related as installed.	IV
0359	43102304	SKF Fafner	N N	6202RS 6202RSC3 6202RSJEM 202P	Bearing, single row radial ball	Kaman Science Corp.	N	Bearings Inc. Besco, Rogers Machinery	 N N N	- Item is adequate for use. - Certification from OES or mfg. to verify tested configuration would meet current guidelines. - Recommend future procurement from OES.	III
0417	68600196	ASEA	N	RK225-052CP	Relay	Fishback/ Lord Elect.	N	ASEA (WI)	CG	- Relays qualified to NUREG Cat II and installed under sound reasons to the contrary position. Dedication acceptable under such conditions, but should be re-reviewed after environmental testing is completed.	II
0422	66900232	Leeds & Northrup	CG	036292	Commutator			Leeds & Northrup	CG	- Item is adequate for use. - FMEA performed in PRE determined item is not safety significant.	IV
0462	56411523	Marotta Scientific/ Parker	N CG	4400172-1458/ 2-145	O-ring	Marotta Scien-tific	N	Air Oil Prod.	N	- Item adequate for use based on like for like position. Parker P/N establishes critical characteristics. - Obtain certification from Parker (audited CG supplier)	III
0489	65002063	Leeds & Northrup	CG	017970	Motor, chart	Leeds & Northrup	CG	Leeds & Northrup	CG	- Adequately procured as Commercial Grade Item from CG ESL vendor with certification to seismic test report and installation verification of operability.	I
0544	68409306	General Electric, Malvern, P.A., Puerto Rico	N	262A7065 P001	Switch, SBM control, 4 pos., 10 contacts	General Electric	Y	General Electric, San Jose	Y	- Adequately procured as Commercial Grade Item from ESL vendor with certification. FMEA performed in evaluation.	I

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	MC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion
0574	43902691	Ingersol-Rand	Y	10BM-69	Retainer, rotor pinion	Stewart Stevenson	N	Coast Engines	CG	II - Item is adequate for use. - Acceptable dedication with dedication bases from Evaluation No. 1192 added as well as PPM 1.5.7 credit taken.
0612	61900132	Bailey Controls	Y	6170K62G 0700	Slidewire; resistance assy			Bailey Wickcliff and CA	Y N	III - Item is adequate for use. - Certification obtained from ESL vendor to meet current guidelines. - Recommend Class I procurement in future.
0633	68093604	Allen Bradley	N	800T-N156	Cover, locking, for push buttons			AMFAC	N	IV - Item is adequate for use. - FMEA applied and part was determined not safety related based on having no functional requirements.
0637	54300470	Whitey	CG	SS-1RS6	Valve, regulating and shutoff			Seattle Valve and Fitting, Inc.	Y	III - Item is adequate for use. - Item has generic safety related application. - Recommend future procurement as Class I.
0645	54502231	ASCO	Y	306-154	Kit, Viton valve rebuilding			Steam Supply & Rubber Co.	N	I - Use of Commercial Grade Items determined to be adequate by Supply System EQE memorandum. - Procurement from ESL vendor recommended to meet current guidelines.
0668	68600525	Potter & Brumfield General Electric	CG Y	27E006 175A9216-P001	Terminal, socket relay solder	General Electric	Y	Radar Electric, General Electric, San Jose	N Y	III - Adequately procured as Commercial Grade Item from ESL and CG audited vendors. - Certification from Potter Brumfield recommended to meet current guidelines.

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	MC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion	
0699	56402773	Parker	CG	N	O-ring silicone rubber			Northwest Seals	N	- Item is adequate for use. - Source inspection performed with COC from vendor and mfg. - Evaluation should be changed to require COC from audited mfg.	II
0714	68409460	Leeds & Northrup	CG	352832	Switch, setpoint setting			Leeds & Northrop	CG	- Item is adequate for use. - FMEA performed indicates item would be nonsafety related.	IV
0762	68603871	Bailey Controls	Y	Add P/N 617K90P01 54 now P/N 6125K63G 0700	Relay, ASM	Bailey Controls	Y	Bailey Controls	Y	- Item is adequate for use. - Acceptable CG dedication of existing stock by post receipt testing and FMEA. COC required for future procurement from ESL vendor.	I
0774	72105355	Cannon General Electric	N	030-09048-004 159C4343 P007	Connector Pin			Radar GE, NJ	N	- Item is not adequate for use. - Items procured from unaudited vendors to GE and Cannon P/N. - Identification and verification of critical characteristics not accomplished. - Use is not controlled.	V
0796	54914111	Lenz Co.	N	2ABC	Valve, air bleeder	R.A. Hiller	Y	Lenz Co.	N	- Item is adequate for use. - Item is like for like replacement. - Procure from OES in future as Class I.	II
0831	65300662	NEI Peebles	Y	A14517-2 215	Brush, electric motor	Stewart Stevenson	N	NEI Peebles	Y	- Item is adequate for use. - Certification obtained from ESL vendor. - Recommended Class I procurement in future.	III
0852	52109981	EMD	N	118752	Connector	Stewart Stevenson	N	Coast Engines	CG	- Item is adequate for use. - FMEA performed indicates item is not safety related.	IV

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	MC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion	
0861	25213832	EMD	N	8032716	Nut, self locking	Stewart Stevenson	N	Coast Engines	CG	- Item is adequate for use. - Acceptable dedication with dedication from Evaluation No. 1192 added as well as PPM 1.5.7 credit taken.	II
0900	68411140	General Electric, Malvern, P.A. Puerto Rico	N	26A 707-P001	Switch, SMB control, 4 pos., 10 contact.	General Electric	Y	North Coast Electric	N	- Acceptable dedication of item by post-receipt testing. - Future procurement could be through GE San Jo with POC required.	I
0909	43902712	EMD	N	8456632	Retainer, rear rotor bearing airstart motor.			EMD	N	- Item is adequate for use. - Acceptable dedication with dedication basis from Evaluation NO. 1192 added as well as PPM 1.5.7 credit taken.	II
0915	68601610	Potter & Brumfield	CG	CSJ38-70010	Relay, CSJ 38-70010.			Radar	N	- Item is adequate for use. - Certification from Potter Brumfield would be necessary to meet current guidelines.	III
0936	42100905	EMD	N	8077938	Coupling, flexible,	Stewart Stevenson	N	EMD	N	- Item is adequate for use. - Acceptable dedication with dedication basis from Evaluation No. 1192 as well as PPM 1.5.7 credit taken.	II
0998	54914496	Limitorque	Y	60-509-0195-4	Handwheel, operator.	Limitor-que	Y	Limitorque	Y	- Item is acceptable for use. - FMEA performed indicates item is non safety related; and used for manual operation only.	IV
1035	54912550	EMD	N	8447977	Seat and spacer kit.	Stewart Stevenson	N	EMD	N	- Item is acceptable for use. - Acceptable dedication with dedication basis from Evaluation No. 1192 added as well as PPM 1.5.7 credit taken.	II

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	HC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion
1059	42100240	Leeds & Northrup	CG	137117	Belt, numerical printing.			Leeds & Northrup	CG	IV - Item is adequate for use. - FMEA performed indicates item is non safety related.
1079	68410076	General Electric, Malvern, P.A. Puerto Rico	N	16SB1CA 7x2	Switch, ammeter type SBI.	General Electric	Y	North Coast Electric	N	I - Adequate dedication of item by post receipt testing. - Future procurement could be through GE San Jose with POC required.
1102	54104512	Dragon Valves	Y	19-11942-72	Spring, Poppet for check valve			Dragon Valves	Y	III - Item is adequate for use. - Purchased Class I with ASME and Part 21 Certification. No dedication required. - Future procurements should be Class I.
1126	58107742	John Crane	Y	D-4562-022-9200	Wear ring on mech. seal			John Crane Portland, OR	N	IV - Item is adequate for use. - FMEA performed and indicates item is non safety related significant.
1132	60805892	Air Monitor	Y	Special	Convertor			Air Monitor	Y	III - Item is adequate for use. - Certification obtained from ESL vendor to meet current guidelines. - Recommend Class I procurement in future.
1155	42103621	Dodge	N	40	Chain			Kaman Bearing	N	IV - Item is adequate for use. - FMEA performed and indicates item is not safety related.
1178	42001701	EMD	N	8069019	Gear, Camshaft Drive	Stewart Stevenson	N	EMD	N	II - Item is adequate for use. - Acceptable as originally evaluated with additional credit taken for PMM 1.5.7 for fit and function verification.

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	MC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion	
1192	43902964	EMD	N	8237400	Shell, Bearing upper and lower half	Stewart Stevenson	N	EMD	N	- Item is adequate for use. - Acceptable as originally evaluated with additional credit taken for PMM 1.5.7 for fit and function verification.	II
1217	74202324	Amphenol	N	MS3102A1 4S5S	Receptacle Box solid shell MIL-C5015	General Electric	Y	ALMAC	N	- Item adequate for use when brought to Supply System Proc. Reg. Eval. 1217. - Supplier(s) should be audited and placed on CG Supplier list to meet current requirements.	III
1231	58602635	EMD	N	9093027	Tube Assembly	Stewart Stevenson	N	EMD	N	- Items adequate for use. - Acceptable dedication with dedication basis from Evaluation No. 1192 added as well as PPM 1.5.7 credit taken.	II
1319	68404533	General Electric	N	12PJV11AF 1 A	Relay - Instantaneous Voltage, 115 VAC	General Electric	Y	North Coast Electric	N	- Acceptable dedication of item by post receipt testing.	I
1354	56508270	Miller Fluid Power	N	090-ES006-500	Seal, tube end			Miller Fluid Power	Y	- Item is adequate for use. - Letter in Supply System file considers items not safety significant.	IV
1595	40300190	General Electric, San Jose	Y	175A8230P 007	Tubing, 0.375" shrinkable	GE	Y	General Electric, San Jose	Y	- Adequately procured from ESL vendor as commercial grade item with certification to verify critical characteristics.	I
1736	58405235	York	N	261540500 6	Filter, Refrig.			York	N	- Items is adequate for use. - FMEA performed indicates item is not safety related.	IV
1933	56413560	Valcor	Y	S101CB21	O-Ring			Valcor	Y	- Item is adequate for use. - Certification should be procured from Valcor to provide adequate harsh environmental qualification.	III

Table 1
COMMERCIAL GRADE DEDICATION REVIEW SUMMARY

8/08/89

Eval No.	HC	MFG	ESL	P/N	Description	OES	ESL	Vendor	ESL	Discussion
2324	68400605	General Electric	N	175A101 3P002	Switch, Pushbutton	General Electric	Y	General Electric, San Jose	Y	Item adequately dedicated by PQC certification and prior seismic testing.

ATTACHMENT 2

Supply System Description of Sample Selection and Population of Commercial Grade Items

Discussion

Commercial Grade Items Population

The Supply System has a population of 9730 commercial grade items that are defined as acceptable for use in safety related applications or on safety related plant equipment.

This population is composed of items with a quality class of 1C (Commercial) procured prior to May of 1986 and CG (commercial grade) procured since May of 1986. 53% of the existing commercial grade items are 1C and 47% are CG (see Exhibit 1). The commercial grade items population can be categorized as follows:

Spare Parts - items with a specific component usage intended, 39% of population

and

Commodities - items without a specific component usage intended, 61% of population

Within each of these categories are items of higher significance or more complicated devices and items of lower significance or simple devices. (See Exhibit 2 for Listing of items considered to be of Low Significance.) The Supply System commercial grade items listing was reviewed to see how many items in each category (Spare Parts vs Components) were of Higher Significance. This review concluded that:

23% or 2279 of the 9730 total population were higher significance items.

21% or 2019 of the higher significance items were spare parts.

15% or 1466 of the higher significance items were quality class CG (post May 1986 procured) spare parts.

See Exhibit 1 for a summary of the Commercial Grade Items population distribution.

Sample Size

A sample size of 50 was judged to be appropriate. Based on the binomial probability distribution, this sample size assures a 95 percent acceptance coefficient for the population at a confidence coefficient in excess of 90 percent, given that no rejects are identified within the randomly selected sample. However, a negatively biased sampling methodology was used (see "Sample Selection" and "Sample Skew" below), which results in an increased coefficient of confidence.

COMMERCIAL GRADE ITEMS

QUALITY CLASS	SPARE PARTS		COMMODITIES		TOTAL	
CG- (SAFETY-RELATED)	2574 (1466	27%* 15%)	1971 (86	20% 1%)	4545 (1552	47% 16%)
1C (PRE-5/86)	1221 (553	12% 6%)	3964 (152	41% 1%)	5185 (705	53% 7%)
TOTAL	3795 (2019	39% 21%)	5935 (260	61% 2%)	9730 (2279	100% 23%)

( ) - HIGHER SIGNIFICANCE ITEMS

* - 50 SAMPLE CHOSEN FROM THIS POPULATION

EXHIBIT 1

LOW SIGNIFICANCE (SIMPLE) ITEMS

ITEM		NO. OF CG ITEMS
O-RINGS	–	230
BOLTS, NUTS, WASHERS ETC.	–	751
GASKETS, PACKAGING	–	628
FUSES, FUSE BLOCKS	–	647
ELECTRONIC PIECE PARTS	–	2715 (RESISTORS, CAPACITORS ETC)
TUBE/PIPE FITTINGS	–	608
LUGS	–	206
CONDUIT, FITTINGS, BOXES	–	979
LUBES, SOLVENTS, ETC.	–	143
LAMPS	–	87
TAPES/MARKERS	–	124
STEEL	–	67
MISC	–	266 (RAGS, PENS, CHART PAPER, ETC)
TOTAL		7451

EXHIBIT 2

Sample Selection

Following the 6/28/89 Enforcement Conference on the 10 commercial grade items the Supply System selected a sample of 50 commercial grade items to be reviewed by CYGNA. The sample of 50 was chosen from the sub-population of Quality Class CG Spare Parts (see Exhibit 1). This sub-population has by far the most higher significance items and consequently represents a more conservative sample than a random selection from the entire population.

The higher significance items make up 23% (2279) of the total population of 9730 items, whereas the higher significance items account for 82% (41) of the 50 sample specimens.

In order to bias the sample towards uncovering potential rejects, a modified sampling process was used instead of a pure random process. The process used to select the sample was as follows:

A computer Listing of Quality Class CG (post May 86) spare parts was used to define the items under consideration. This listing was in order of the Supply System procurement evaluation Log No. - lowest number or oldest to highest number or newest. This report contained 87 pages.

Starting with page 1 a single item was chosen at random by matcode (Supply System material identification number) which precluded any prejudice in the selection. Following this selection a single item was similarly selected from page 2, etc. This process was used to select the first 38 items. Since this was resulting in a sample skewed towards older evaluations, we began to skip pages for the remaining sample item selections. On the pages not skipped, the remaining 12 items were also "blind" selections based on matcode.

Additionally, as similar items repeated in the sample selection process they were rejected and another item chosen to give a wider, more comprehensive test of the Supply System dedication process.

Sample Skew

This sampling process provided a more conservative test of the population than a truly random selection. The sample was taken from a sub-population containing the highest percentage of higher significant items and was skewed towards older evaluations (82% prior to 1/1/88) as is demonstrated by Exhibit 4. In fact, 98% of the sample items had been evaluated prior to the June 1988 issue of the EPRI NCIG-07 guidance.

Exhibit 3 summarizes the Sample Selection.

CG ITEMS SAMPLE SELECTION

TOTAL CG ITEMS - 9730

		% OF POPULATION
COMMODITY/SIMPLE CG ITEMS	- 7451	77%
REMAINING CG ITEMS	- 2279	23%

CYGNA REVIEW SAMPLE - 50 ITEMS SELECTED

9	SIMPLE	18%
41	SIGNIFICANT ITEMS	82%

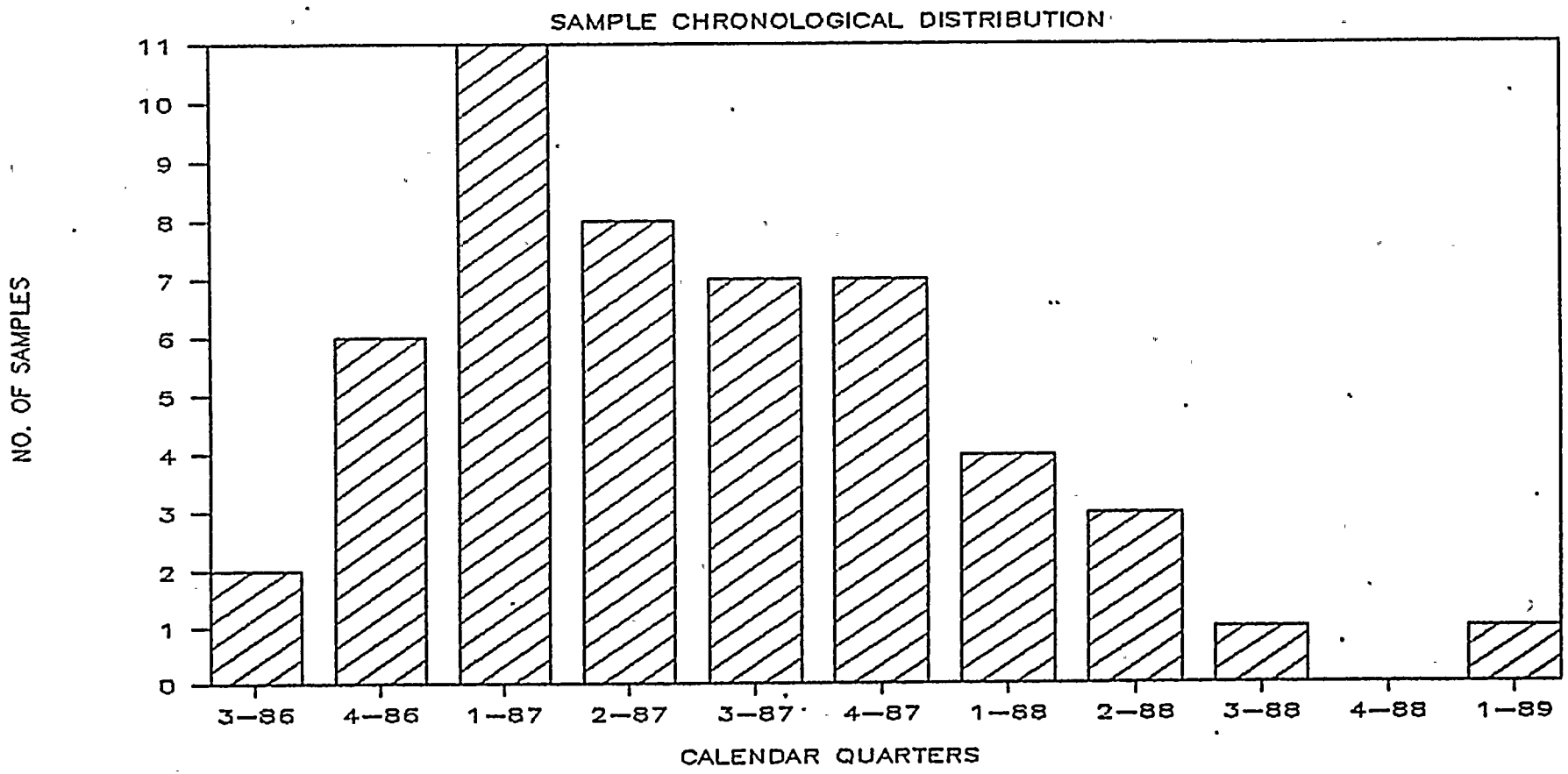
BASED ON MIL 105D A SAMPLE SIZE OF 50 WAS SELECTED TO PROVIDE 95% CONFIDENCE.

SAMPLES WERE "BLIND" SELECTED FROM A LISTING OF CG ITEMS BY EVALUATION NO.

SELECTED 1/PAGE FOR 38 PAGES OF 87 PAGE REPORT - THEN SKIPPED PAGES. ALSO ELIMINATED SOME REPEAT SIMPLE ITEMS.

RESULTING SAMPLE WAS SKEWED TOWARDS OLDER DEDICATIONS AND LESS SIMPLE ITEMS.

EXHIBIT 3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CALENDAR QUARTERS

EXHIBIT 4

Results Analysis

Following the CYGNA Analysis the Supply System re-evaluated the sample size to provide assurance that the conclusions were statistically correct. We found that for the population under consideration a sample size of 59 with no rejects identified in the sample would assure a population acceptance coefficient of 95 percent at a 95 percent confidence level (commonly referred to as 95/95 sampling constraints), based on a randomly selected sample. The confidence level corresponding to a sample size of 50 (at the same 95 percent population acceptance coefficient) would be 92 percent, if the sample were selected randomly. However, since a negatively biased sampling methodology was used, the confidence level provided is actually higher than 92 percent.

The 10 items reviewed by the Staff and the Supply System coupled with the CYGNA review of an additional 50 items has been determined to be an adequate sample size, especially in light of the sample bias towards the older and/or more significant items.

Additional Data

In May of 1986, as part of the programmatic improvements in procurement, the Supply System committed to re-evaluate the procurement requirements for all items before allowing procurement. Since that time the Supply System has re-evaluated 10316 (49%) of its spare parts and 17868 (33%) of its total inventory. During these reviews some problems were noted and were documented as nonconformances. The total nonconformances written was approximately 20, and none were safety significant or reportable.

Since our procedure revisions in May of 1989 we have re-evaluated additional items without any significant findings.

These re-evaluations provide us with additional confidence that our past practices, although not thoroughly documented have not resulted in a significant safety concern for our existing inventory.

See Exhibit 5

Conclusion:

The Supply System concludes that there is reasonable assurance the inventory of commercial grade items is acceptable for use in safety related applications.

The Supply System is committed to upgrade the procurement requirements/dedication requirements for all commercial grade items prior to the next procurement. In light of the continuously evolving nature of this area we believe this is a reasonable and responsible plan of action and in accord with the NUMARC initiative.

SUPPLY SYSTEM RE-EVALUATION

DATE	NO. SPARE PARTS	NO. RE-EVALUATED	TOTAL INVENTORY ITEMS	NO. RE-EVALUATED
DECEMBER 1986	15832	647 (4%)	49095	3223 (6%)
MAY 1989	20633	9592 (46%)	53953	15943 (29%)
NOVEMBER 1989	21004	10316 (49%)	54511	17868 (33%)

RESULTS DEC 1986 - MAY 1989 - 4801 NEW SPARE PARTS

- 4791 RE-EVALUATED SPARE PARTS

MAY 1989 - NOV 1989 - 371 NEW SPARE PARTS

- 353 RE-EVALUATED SPARE PARTS

EXHIBIT 5