BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

NOTICE OF STAFF WORKSHOP

TO

WATER AND WASTEWATER UTILITIES

AND

ALL INTERESTED PERSONS

RE: UNDOCKETED

USED AND USEFUL RULEMAKING WORKSHOP

ISSUED: __June 12, 1995

NOTICE is hereby given that the Staff of the Florida Public Service Commission will conduct a workshop, in the above-referenced matter, to which all persons are invited, at the following time and place:

9:30 a.m., Wednesday and Thursday, July 12 - 13, 1995 Room 152, Betty Easley Conference Center 4075 Esplanade Way Tallahassee, Florida 32399

PURPOSE

The purpose of this workshop is to discuss and evaluate staff's proposed rules regarding the determination of plant used and useful in rate proceedings. A copy of staff's proposed rules is attached to this Notice. Workshop participants should review the rules and be prepared to comment on them.

Parties who wish to comment but cannot attend the workshop are encouraged to file comments with the Division of Records and Reporting, 25 0 Shumard Oak Blvd., Tallahassee, Florida 32399-0850, on or before July 5, 1995, specifically referencing "Undocketed Water and Wastewater Used and Useful Workshop."

Those rules pertaining to both water and wastewater systems, such as margin reserve, will be discussed first on July 12th. The workshop will then focus on issues applicable to wastewater systems. The final topic will be the rules pertaining to water systems only.

Any person requiring accommodation at this workshop due to a physical impairment should call the Division of Records and Reporting at (904) 413-6770 at least five calendar days prior to the workshop. Persons who are hearing or speech impaired should contact the Florida Public Service Commission using the Florida Relay Service, which can be reached at (800) 955-8771 (TDD).

05391 JUN 12 8

NOTICE OF WORKSHOP UNDOCKETED PAGE 2

General Information

Pursuant to Section 367.081(2)(a), Florida Statutes, the Commission is required to consider plant "used and useful" in the public service. The Commission practice is to consider used and useful in each rate proceeding. In an effort to codify prior practice, and to introduce new procedures, the proposed rules are offered. A utility's investment in transmission and distribution and collection lines is not addressed by the default used and useful formulas; however, it is addressed with respect to margin reserve. Due to the potential complexity of codifying formulas for lines, this subject is not being addressed at the workshop.

Parties who wish to submit materials for the Commission's and participants' review and discussion should submit them to Mr. John Williams, Division of Water and Wastewater, 2540 Shumard Oak Blvd., Tallahassee, Florida 32399-0850, by July 3, 1995, so that copies may be made.

Issues

Both Water and Wastewater Systems

- 1. Are the proposed definitions adequate?
- 2. Are the proposed mar in reserve calculations proper and sufficient?
- Have cost/benefit analyses been addressed adequately?

Wastewater Systems Only

- 4. Are infiltration and inflow addressed sufficiently?
- 5. Are the used and useful default formulas for wastewater systems adaquate?

Water Systems Only

- 6. Is the proposed rulemaking regarding fire flow appropriate and adequate?
- 7. Has unaccounted for water been addressed sufficiently?
- 8. Are the used and useful default formulas for water systems adequate?
- 9. What is the appropriate methodology for determining instantaneous demand?

NOTICE OF WORKSHOP UNDOCKETED PAGE 3

JURISDICTION

Jurisdiction is vested in this Commission pursuant to Chapter 367, Florida Statutes. The workshop will be governed by the provisions of that Chapter and Chapters 25-22 and 25-30, Florida Administrative Code.

By DIRECTION of the Florida Public Service Commission, this 12th day of June , 1935 .

BLANCA S. BAYO, Director Division of Records and Reporting

(SEAL)

SKE/KA

25-30.432 Used and Useful in Rate Case Proceedings.

	Man address to the Control of the Co
2	(1) Definitions - the following definitions apply to Rule 25-
3	30.432. F.A.C., for determining used and useful water and wastewater
4	facilities.
5	(a) Economies of scale - The decrease in unit cost of water or
6	wastewater plant that typically occurs with an increase in system
2	capacity. Economies of scale can be defined either in the context of
8	total system capacity or changes in a single component of the system.
2	(b) Effluent Disposal Facilities - this includes, but is not
0	limited to, the transmission lines, percolation and evaporation ponds,
1	sprayfields, irrigation systems, effluent pumping equipment, and deep
2	wells utilized in the disposal of effluent or reclaimed water, as required
3	to meet applicable federal, state and local requirements.
4	(c) Emergency Storage - that storage required by a water system to
5	meet the emergency-like demands of the customers. Typically, Emergency
6	Storage is made available when it is more cost effective to provide the
2	storage and pumping facilities than to add redundancy to the system for
8	emergency conditions. The quantity of Emergency Storage need is a
9	function of the duration of the emergency condition and is assumed to be
0	approximately one half of the maximum day demand,
l.	(d) Equalization Volume - the quantity of storage in a water
2.	system necessary to meet the customers' greatest demands which are beyond
3	the throughput capacity of the source of supply or water treatment

A (1) (1) (1)	equapment. The equalization volume is assumed to be approximately one-
2	quarter of the maximum daily demand.
3	(e) Equivalent Residential Connection (ERC) - 350 gpd per ERC for
4	water and 280 gpd per ERC for wastewater.
5	(f) Fire Flow Requirement - as defined in 25-30,432(5)(b), F.A.C.
6	(g) Firm Reliable Capacity - the capacity of a particular
1	component of a water facility in which at least the largest unit is
8	assumed to be out of service. If the used and useful category contains
2	several components, the Firm Reliable Capacity is assumed to be the
0	limiting component in that category with the largest unit out of service.
1	If there is only one component, then that component's capacity becomes the
2	Firm Reliable Capacity. For finished water storage, the Firm Reliable
3	Capacity excludes any unusable or dead storage (10% of ground storage
4	capacity).
5	(h) Infiltration - refers to those extraneous flows (usually from
6	groundwater sources) that enter the wastewater system through openings in
7	pipes that may be caused by normal deterioration, corrosion, or damage
8	from ground movement or structural overload,
9	(1) Anclow - refers to extraneous flows from sources other than
0	infiltration, such as surface water run-off into manholes or from
1	unauthorized connections to surface water sources.
2	(j) Instantaneous Demand - the greatest demand that a water system
3	attains. It is typically used only as a design criteria for small water

1	systems with no storage and a small distribution system that does not have		
2	the ability to absorb these instantaneous demands through depressurization		
3	of the distributions system. The charts in Rule 25-30,432(7), F.A.C.,		
4	shall be used to determine the instantaneous demand unless specific		
5	quantitative information indicates greater demands.		
6	(k) Large Water System - a system that has a firm reliable		
1	capacity of 1 million gallons per day or greater. Staffing shall be as		
<u>8</u>	mandated in Rule 62-599, F.A.C.		
9	(1) Margin Reserve - as defined in 25-30,432(5)(a), F.A.C.		
0	(m) Maximum Day Demand - the maximum daily demand that a water		
1	system attained during the past 5 years of time, exclusive of emergency or		
2	fire flow events.		
3	(n) Other Wastewater Facilities - this includes, but is not		
4	limited to, disinfection units, emergency generators, auxiliary engines,		
5	customer service laterals, laboratory equipment, utility office and other		
6	general plant and equipment used in the operation of a wastewater system.		
2	Specifically excluded from this definition are a wastewater system's		
8	pumping stations and collection mains (both gravity and force).		
9	(o) Other Water Facilities - this includes, but is not limited to.		
0	hydropneumatic tanks, disinfection facilities, emergency generators,		
1	auxiliary engines, customer service lines and meters, laboratory		
2	equipment, utility office and other general plant used in the operation of		

CODING: Words underlined are additions; words in struck-through type are deletions from existing law.

a water system. Specifically excluded from this definition are a water

23

1	system's transmission and distribution lines.
2	(p) Peak Hour Demand - the greatest demand attained by a water
3	system over a sustained period of 60 minutes. Typical design criteria for
4	a Peak Hour Demand of 2 times the maximum day demand or 1.1 gpm per ERC
5	can be used if historical flow data is not available.
6	(q) Small Water System - a system that has a firm reliable
2	capacity of less than 1 million gallons per day. Staffing shall be as
8	mandated in Rule 62-699, F.A.C.
2	(r) Unaccounted for water - all water produced or purchased by a
0	water utility that is neither sold, metered nor accounted for in the
1	records of the utility. Water, other than that sold, that shall be
2	accounted for includes, but is not limited to, water for plant operations,
<u>3</u>	line flushing, hydrant testing, hydrant use, sewer cleaning, and street
4	c)eaning.
5	(s) Wastewater Customer Demand - the wastewater flows which match
6	the utility's specified time frame in its Department of Environmental
2	Protection (DEP) permit annual average daily flow, the three month
8	average daily flow, or the maximum month average daily flow,
9	(t) Wastewater Permitted Capacity - the established design
0	capacity of a wastewater facility in its DEP permit and the specified time
1	frame (annual average daily flow, maximum monthly average daily flow,
2	three-month average daily flow).
3	(u) Wastewater Treatment Equipment , this includes but is not

1	limited to, the influent structure, pretreatment facilities, pumps,
2	serators, clarification tanks, filters, digestors, and chlorine contact
3	equipment.
4	(2) The utility's investment, prudently incurred, in meeting its
2	statutory obligations to provide safe, efficient and sufficient service,
<u>6</u>	shall be considered used and useful.
2	(3) Utilities are encouraged to undertake planning that recognizes
8	conservation, environmental protection, economies of scale, and which is
2	economically beneficial to its customers over the long term.
0	(4) In determining those portions of water and wastewater systems
7	that are used and useful in serving the public, the Commission shall
2	consider:
3	(a) the design and construction requirements set forth in Chapters
4	62-532, 62-555, 62-600, 62-601, 62-604, 62-620 and 62-640, F.A.C.
5	(b) the investment in land acquired or facilities constructed or
6	to be constructed in the public interest within a reasonable time in the
2	future:
.8	(c) the prudence of the investment, taking into consideration such
9	factors as the reatment process, water storage capacity, economies of
20	scale, the historical and projected rate of growth in customers and
1	demand, regulatory requirements, including those requiring plant
2	redundancies, seasonal demand characteristics, residential and commercial
3	mix, and the configuration of the service area.

1 (5) For the purpose of calculating used and useful, the following 2 specific factors shall apply. When applying these factors, references to demand shall mean the demand per connection (in ERCs) used for design or 3 permitting, or the actual his; orical demand per connection if such data has been shown by the utility to be accurate and reliable. 5 6 (a) Margin Reserve 7 The Commission recognizes that for a utility to meet its 8 statutory responsibility, it must have sufficient capacity and investment 9 to meet the existing and changing demands of present customers and the demands of potential customers within a reasonable time. The investment 10 needed to meet the demands of potential customers and the changing demands 11 12 of existing customers is defined as margin reserve. Margin reserve is 13 recognized as a component of used and useful rate base. The Commission 14 shall include an allowance for margin reserve if requested by the utility. 15 In determining the allowable investment in margin reserve, the 16 Commission shall consider, but not be limited to, the functions of each 17 component of plant, regulatory lag, the rate of growth in customers and 18 demand, and the time needed to construct plant (the "construction 19 factor"). 20 3. As a part of its rate filing, the utility shall submit 21 historical, reliable data for a minimum of four years, if available,

CODING: Words underlined are additions; words in struck through type are deletions from existing law.

preceding the test year and including the test year for the year-end

number of customers by class and meter size; the annual sales by class;

22

23

•	the aimust created or pumped flows for the system; and system peak day		
2	flows for each year. The utility's most recent wastewater capacity		
3	analysis report, if any, filed with DEP shall also be submitted as part of		
4	the rate filing.		
5	4. Unless otherwise justified, margin reserve shall be calculated		
<u>6</u>	by applying linear regression to the utility's five years historical		
2	growth data (in ERCs) so that a projected growth can be determined and		
8	then multiplying that growth by the appropriate construction factor.		
2	a. Water source and treatment facilities and wastewater treatment		
0	and disposal facilities: the calculated growth (in ERCs) multiplied by the		
1	following construction factors:		
2	(1) water source, treatment facilities, and each water system		
3	component have a construction factor of 3 years;		
4	(ii) wastewater treatment and disposal facilities have a		
5	construction factor of 3 years:		
6	b. Margin reserve for transmission and distribution lines and		
2	pumping stations and collection mains shall be the calculated growth		
8	multiplied by a construction factor of 1 year,		
9	(b) fire Flow		
0	1. Fire flow shall be considered in used and useful default		
1	formulas for storage and high service pumping for any utility that		
2	requests that fire flow be a consideration in its system requirements. If		
3	the Commission determines that a utility can provide fire flow in a more		

2. An allowance for fire flow shall be included in used and useful calculations up to the capacity of the appropriate component. If a utility cannot provide adequate, reliable fire flow and is requesting an allowance for ire flow in used and useful calculations, the Commission shall require the utility to take the steps necessary to provide such fire flow capacity. In doing so, the Commission shall set a reasonable timetable for compliance and may later reduce rates for that portion associated with allowed fire flow capacity if such requirements are not

met within	the r	pecifi	ed ti	metable.
------------	-------	--------	-------	----------

- 3. When fire flow requirements are set by a governmental authority, those requirements shall be the basis for determining the fire flow component of used and useful. In such cases, as part of its rate filing, the utility shall identify and file with the Commission a copy of the applicable governmental fire flow requirements. In all other cases, unless specific support is provided, the Commission shall consider a minimum fire flow demand to be 500 gallons per minute (gpm) for single family and 1,500 gpm for multiple family and commercial areas for a duration of 2 hours for needed fire flows up to 2500 gpm, and 3 hours for needed fire flows of 3000 and 3500 gpm. Such requirements shall be satisfied without causing deterioration of water pressure below 20 pounds per square inch (psi).
- 4. Inasmuch as Rule 25-30,432(5)(b) deviates from prior Commission practice whereby an allowance for fire flow capacity in composite used and useful plant calculations was considered, the impact on those utilities affected by a future reduction to used and useful percentages for source of supply and/or treatment plant due to such deviation from prior practice regarding fire flow allowance shall be considered on a case by case basis.
 - (c) Unaccounted for Water
- 1. To recognize conservation of water as a fundamental and proper concern of water system operation, water utilities are encouraged to

1	exercise good operational and economic management toward preventing
2	depletion and wasteful use of this important natural resource. Good
2	modern water utility practice dictates that, wherever possible, all
4	customer services and plant output and plant uses be metered and
2	reasonable records be kept.
<u>6</u>	2. The Commission recognizes that some uses of water are readily
2	measurable and others are not. Each utility is encouraged to establish
<u>8</u>	procedures to measure or estimate the quantity of water used but not sold,
9	by cause, and to maintain documentation for those measurements and
10	estimates.
11	3. The Commission shall consider the amount of unaccounted for
12	water in determining used and useful plant percentages and shall allow the
13	American Water Works Association's (AWWA Manual M-8) design level of
14	leakage (2-3 percent plus the standard 10 percent for a maximum of 12.5
15	percent) without further explanation. The Commission may impute revenues
16	or reduce purchased power and chemical expenses where inadequate
17	explanation in given for unaccounted for water in excess of this amount.
18	(d) Infiltration and Inflow

(d) Infiltration and Inflow

19

20

21

22

23

- The impact of infiltration and inflow on wastewater treatment and collection systems shall be considered in determining both the appropriate level of operation and maintenance expenses and used and useful plant percentages.
 - The Commission recognizes as reasonable the Infiltration

Specification Allowances set forth in Water Pollution Con;rol Federation (WPCF) Manual of Practice No. 9. Absent sufficient justification to the contrary, excess infiltration is defined as flows in excess of 500 gallons per day (gpd) per inch diameter of pipe per mile (gpd/in, diam./mile) for all gravity lines, including service laterals. Excessive inflow will be determined on a case-by-case basis if warranted.

(e) Cost/benefit Analysis - The Commission may order a utility to perform a cost/benefit analysis to determine the amount of water losses or wastewater infiltration and inflow that may be economically eliminated. If the cost/benefit analysis is ordered by the Commission in the course of evaluating a rate application, the actual or estimated prudent cost of the analysis shall be recovered through the revenues authorized in that rate proceeding, and the cost shall be amortized over five years. If the analysis is ordered outside of a formal rate proceeding, the utility may request the cost be recovered through a limited proceeding pursuant to section 367.0822. F.S.

(f) Used and Useful Analysis

- 1. As a part of its rate filing, each utility shall provide a determination of the used and useful percentage for each primary plant account along with the supporting formulas and documentation.
- 2. In lieu of presenting evidence in support of used and useful percentages, the utility may elect to use the default formulas in Rule 25-30.432(6). F.A.C., for calculating used and useful percentages for water

1	supply, treatment, pumping and storage equipment, and wastewater treatment		
2	and effluent disposal equipment. Documentation in support of requested		
3	used and useful percentages for a water utility's transmission and		
4	distribution lines and a wastewater utility's pumping stations and		
5	collection mains (both gravity and force) shall be presented by the		
6	utility.		
2	(6) Used and useful default formulas. The appropriate units to be		
8	used are included with each default formula. Because of the unique nature		
2	of a water system's transmission and distribution lines and a wastewater		
0	system's pumping stations and collection mains (both gravity and force).		
1	the default formulas presented here do not address these items; however,		
2	as stated in Rule 25-30,432(5)(f)2, the utility shall present		
3	documentation in support of requested used and useful percentages for		
4	these items.		
5	(a) Small water systems (less than 1 million gallons per day (MGD)		
6	firm reliable capacity).		
2	1. Small water systems with adequate reliable finished water		
8	storage capacity to meet the local fire flow ordinances and to meet the		
2	peak hour & mand of its customers shall use the following formulas:		
0	a. Water source of supply:		
1	(Maximum Day Demand + Margin Reserve - Excessive Unaccounted		
2	For Water)/Firm Reliable Capacity (gpd)		
3	b. Water treatment equipment:		
	CODING: Words underlined are additions; words in struck through type are deletions from existing law.		

1		(Maximum Day Demand + Margin Reserve - Excessive Unaccounted
2		For Water)/Firm Reliable Capacity (gpd)
3	<u>C.</u>	Finished water storage:
4		(Equalization Volume + Fire Flow Requirement + Emergency
5		Storage + Margin Reserve)/Firm Reliable Capacity (gallons)
6	<u>d</u> .	Water high service pumping:
2		(Instantaneous Demand + Margin Reserve - Excessive Unaccounted
8		For Water)/Firm Reliable Capacity (gpm)
2		or, if the utility chooses:
0		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve -
u		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)
2	<u>e.</u>	Other water facilities: 100 percent used and useful
3	2.	Small water systems with no storage facilities other than
.4	hydropneum	atic tanks or with insufficient storage capacity to meet the
5	local fire	flow ordinances and to meet the instantaneous demand of its
6	customers	shall use the following formules:
7	A.	Water source of supply:
8		(Instantaneous Demand + Margin Reserve - Excessive Unaccounted
9		.or Water)/Firm Reliable Capacity (gpm)
20		cr. if the utility can show it is the most economical way to
1	provide fi	re flow:
22		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve -
13		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)

1	<u>þ.</u>	Water treatment equipment:	
2		(Instantaneous Demand + Margin Reserve - Excessive Unaccounted	
3		For Water)/Firm Reliable Capacity (gpm)	
4		or, if the utility can show it is the most economical way to	
5	provide fi	re flow:	
<u>6</u>		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve -	
2		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)	
<u>8</u>	ē.	Finished water storage: 100 percent used and useful (gallons)	
2	<u>a.</u>	Water high service pumping:	
LO		(Instantaneous Demand + Margin Reserve - Excessive Unaccounted	
u		For Water)/Firm Reliable Capacity (gpm)	
12		or, if the utility chooses:	
L3		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve -	
<u>.4</u>		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)	
15	9.	Other water facilities: 100 percent used and useful	
16	(p)	Large water systems (1 MGD or greater firm reliable capacity):	
17	1.	Large water systems with adequate reliable finished water	
<u>.8</u>	storage capacity to meet the local fire flow ordinances and to meet the		
9	peak hour	dr mand of its customers shall use the following formulas;	
20		Water source of supply:	
1		(Maximum Day Demand + Margin Reserve - Excessive Unaccounted	
22		For Water)/Firm Reliable Capacity (gpd)	
23	<u>b.</u>	Water Treatment Equipment:	

1		(Maximum Day Demand + Margin Reserve - Excessive Unaccounted	
2		For Water)/Firm Reliable Capacity (gpd)	
3	£.	Finished water storage:	
4		(Equalization Volume + Fire Flow Requirement + Emergency	
2		Storage + Margin Reserve)/Firm Reliable Capacity (gallons)	
<u>6</u>	<u>d.</u>	Water high service pumping:	
1		(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For	
<u>8</u>		Water)/Firm Reliable Capacity (gpm)	
2		or, if the utility chooses:	
<u>ro</u>		Maximum Day Demand + Fire Flow Requirement + Margin Reserve -	
u		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)	
12	1 -	Other water facilities: 100 percent used and useful	
<u>13</u>	2.	Large water systems with no storage facilities other than	
14	hydr	hydropneumatic tanks or with insufficient storage capacity to meet	
15	the	the local fire flow ordinances and to meet the peak hour demand of	
<u>L6</u>	its customers shall use the following formulas:		
1.7	<u> </u>	Water source of supply:	
18		(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For	
19		Water)/Firm Reliable Capacity (gpm)	
20		or, if the utility can show it is the most economical way to	
21	provide fire flow:		
22		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve -	
23		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)	
		등록(2015)(14) 15:15 전 1	

1	b.	Water treatment equipment:
2		(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For
2		Water)/Firm Reliable Capacity (gpm)
4		or, if the utility can show it is the most economical way to
5	provide fire flow:	
<u>6</u>		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve-
1		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)
8	<u>e</u> r	Finished water storage: 100 percent used and useful (gallons)
2	<u>d.</u>	Water high service pumping:
o		(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For
u		Water)/Firm Reliable Capacity (gpm)
2		or, if the utility chooses:
<u>13</u>		(Maximum Day Demand + Fire Flow Requirement + Margin Reserve-
<u>(4</u>		Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)
15	<u>e.</u>	Other water facilities: 100 percent used and useful
<u>.6</u>	(9)	Wastewater systems:
.7	1.	Wastewater treatment equipment:
<u>.8</u>		(Wastewater Customer Demand + Margin Reserve - Excessive
.2		nfiltration and Inflow)/Permitted Capacity (gpd)
20	2.	Effluent disposa, facilities:
1		(Wastewater Customer Demand + Margin Reserve - Excessive
22		Infiltration and Inflow)/Permitted Capacity (gpd)
13	3.	Other wastewater facilities: 100 percent used and useful
		CODING: Words underlined are additions; words in struck through type are deletions from existing law.

l.	(7) Unless specific quantitative information indicates greater					
2	demands, a water system's Instantaneous Demand, for purposes of					
1	determining used and useful, will be calculated from the following charts					
Ł	which are from the U.S. Environmental Protection Agency Manual "Small					
ž	Water Systems Serving The Publi;",					
i	[chart]					

FLORIDA PUBLIC SERVICE COMMISSION - RECORDS AND REPORTING

Requisition for Ph	iotocopying and Mailing
Number of Originals Requested By	6,13,95 Copies Per Original 374
	or (Date) 7/13 - 13/51 In Docket No. Unduction
Special Ho	andling Instructions ————————————————————————————————————
Distrik	oution/Mailing
Distributed/Mailed To Commission Offices Docket Multing List	Number Distribution/Mailed To
	within one working day after issue unless specified here:
Job Number 62 v	representation (verified By 10)
	ob Checked For Correctness and Quality (Initial)
	erified By

PSC/RAR 12(2/91)