

ES-303

RO Competency Grading Worksheet  
For Integrated Plant Operations

Form ES-303-S

1. UNDERSTAND AND INTERPRET ANNUNCIATORS AND ALARM SIGNALS

DID THE APPLICANT:

(a) NOTICE and ACKNOWLEDGE alarms?

3	2	1
Consistent and timely acknowledgement	Minor difficulties or lapses in awareness or response	Failed to notice and acknowledge important alarms; distracted by nuisance alarms, etc.
[.30 X = ]		

(b) Correctly INTERPRET and VERIFY that annunciators and alarm signals were consistent with plant and system conditions (including the use of alarm response procedures (ARPs), when necessary)?

3	2	1
Consistent and efficient interpretation and verification	Minor inaccuracies in interpreting and verifying signals	Significant inaccuracies resulted in plant degradation; poor use of ARPs
[.40 X = ]		

(c) ATTEND to ANNUNCIATORS and ALARM SIGNALS in order of importance and severity?

3	2	1
Consistent attention in all cases	Minor inaccuracies and oversights	Did not prioritize attention to signals; inattentive to important alarms
[.30 X = ]		

11/1

ES-303

2

Form ES-303-S

2. DIAGNOSE EVENTS AND CONDITIONS BASED ON SIGNALS AND READINGS

DID THE APPLICANT:

(a) RECOGNIZE off-normal trends and status?

3

2

1

Quick and accurate recognition

Some delays in recognizing off-normal conditions

Serious omissions, delays, or inaccuracies in recognizing events

[.40 X = ]

(b) Correctly USE REFERENCE MATERIAL (prints, books, charts) to aid in diagnosing and classifying events and conditions?

3

2

1

Correctly used references, when necessary

Minor errors in using or relying on references

Did not use or incorrectly used references to diagnose events

[.20 X = ]

(c) Correctly DIAGNOSE plant conditions based on control room indications?

3

2

1

Diagnoses were accurate

Minor errors or difficulties in diagnoses

Faulty diagnoses adversely affected plant status

[.40 X = ]

ES-303

3

Form ES-303-3

**3. UNDERSTAND PLANT AND SYSTEM RESPONSE**

**DID THE APPLICANT:**

**(a) LOCATE and correctly INTERPRET relevant Instruments and other Indicators of plant and system response(s)?**

3

2

1

Accurate and efficient location and Interpretation of Instruments

Minor errors in locating and interpreting Instruments and displays

Serious omissions or Inaccuracies in interpreting Instruments

[.33 X = ]

**(b) Demonstrate KNOWLEDGE of SYSTEM OPERATION, including set points, Interlocks, and automatic actions?**

3

2

1

Demonstrated thorough understanding of system operations

Minor instances of errors due to inadequate knowledge

Inadequate knowledge resulted in plant degradation

[.33 X = ]

**(c) Demonstrate an understanding of how his or her ACTIONS (or Inaction) AFFECT PLANT and SYSTEM CONDITIONS?**

3

2

1

Understood the effect of actions on plant and systems

Minor misunderstanding of effect of actions on plant and systems

Appeared to act without knowledge of or regard for effect on plant and systems

[.33 X = ]

ES-303

4

Form ES-303-3

**4. COMPLY WITH AND USE PROCEDURES AND TECHNICAL SPECIFICATIONS DID THE APPLICANT:**

**(a) REFER TO the appropriate procedure in a timely manner?**

3	2	1
Quickly located appropriate procedures	Minor difficulties and oversights in referring to appropriate procedures	Problems and failures in referring to procedures in important instances
		[.20 X = ]

**(b) RECOGNIZE EOP ENTRY CONDITIONS and carry out appropriate immediate actions without the aid of references or other forms of assistance?**

3	2	1
Consistent, accurate and timely recognition	Minor lapses or errors, but actions generally appropriate	Did not accurately execute actions
		[.40 X = ]

**(c) COMPLY WITH procedures (including precautions and limitations) in an accurate and timely manner?**

3	2	1
Accurate and timely compliance	Few errors; corrections made in sufficient time to avoid adverse effect	Many significant errors; excessive assistance required
		[.20 X = ]

**(d) RECOGNIZE plant conditions that are addressed in technical specifications?**

3	2	1
Recognized and complied with LCOs and action statements	Minor assistance required to recognize conditions and/or comply with LCOs and action statements	Did not recognize conditions and/or comply with LCOs and action statements
		[.20 X = ]

ES-303

5

Form ES-303-S

5. OPERATE THE CONTROL BOARD

DID THE APPLICANT:

(a) LOCATE CONTROLS efficiently and accurately?

3	2	1
Promptly located appropriate controls in all instances	Some minor hesitancy and difficulty in locating controls	Unable to locate controls without assistance
		[.25 X = ]

(b) MANIPULATE CONTROLS in an accurate and timely manner?

3	2	1
Control Manipulations were consistently accurate and timely	Minor shortcomings, but efficiently mitigated any resulting consequences	Improper manipulations resulted in major system perturbations
		[.25 X = ]

(c) ACT appropriately in response to INSTRUMENT READINGS?

3	2	1
Responses were appropriate and timely	Generally adequate response; some errors and lapses	Failed to react appropriately to instrument readings without assistance
		[.25 X = ]

(d) Take MANUAL CONTROL of automatic functions when appropriate?

3	2	1
Took manual control when appropriate	Minor delays and some prompting necessary before overriding automatic functions	Depended on automatic actions; had to be prompted to take manual control
		[.25 X = ]

ES-303

6

Form ES-303-3

6. COMMUNICATE AND INTERACT WITH OTHER CREW MEMBERS

DID THE APPLICANT:

(a) PROVIDE clear and accurate INFORMATION on system status to others for the performance of their jobs?

3

2

1

Provided others with accurate and pertinent information

Minor instances of needing to be prompted for input; some incomplete and inaccurate information

Failure to accurately provide important information to others jeopardized plant status

[.33 X = ]

(b) Effectively RECEIVE INFORMATION from others (including requesting, acknowledging, and attending to information)?

3

2

1

Responded and reacted appropriately to information from others

Minor instances of failure to acknowledge or respond to information

Inattentive to information provided by others

[.33 X = ]

(c) CARRY OUT the INSTRUCTIONS of the supervisor successfully?

3

2

1

Ably carried out all supervisory objectives; discussed instructions when questionable

Minor hesitancy and difficulty in following orders, but ultimately complied successfully

Failed to promptly and accurately follow directions; blindly complied with erroneous orders

[.33 X = ]

ES-303 SRO Competency Grading Worksheets Form ES-303-4  
For Integrated Plant Operations

1. UNDERSTAND AND INTERPRET ANNUNCIATORS AND ALARM SIGNALS

DID THE APPLICANT:

(a) NOTICE and ATTEND to annunciator and alarm signals in order of their importance and severity?

3	2	1
Responded accurately and efficiently in all instances	Minor difficulties in attending to signals or prioritizing attention	Failed to attend to or prioritize important alarms; responded slowly; distracted by nuisance alarms
		[.30 X = ]

(b) Correctly INTERPRET the meaning and significance of alarms and annunciators (including the use of alarm response procedures (ARPs) when necessary)?

3	2	1
Understood and quickly determined what failures alarms were indicating	Minor inaccuracies or delays in interpreting alarms	Misinterpretations, delays, or misuse of ARPs resulted in plant degradation
		[.35 X = ]

(c) VERIFY that annunciator and alarm signals were consistent with plant and system conditions?

3	2	1
Ensured proper verification when necessary	Minor lapses in alarm verification, but no inappropriate actions were taken as a result of inadequate verification	Failed to correctly verify signals on important occasions; did not notice inconsistencies between alarms and plant conditions
		[.35 X = ]

ES-303

2

Form ES-303-4

**2. DIAGNOSE EVENTS AND CONDITIONS BASED ON SIGNALS AND READINGS**

**DID THE APPLICANT:**

**(a) RECOGNIZE off-normal trends and status?**

3	2	1
Quick and accurate recognition	Some delays in recognizing off-normal conditions	Serious omissions, delays, or inaccuracies in recognizing trends
		[.25 X = ]

**(b) Ensure the collection of CORRECT, ACCURATE, and COMPLETE information and reference material on which to base diagnoses?**

3	2	1
Ensured that all relevant indications and references were checked	Minor instances of overlooking, overrelying on, or misinterpreting indications and/or references	Serious instances of misusing or failing to use important information or data
		[.25 X = ]

**(c) Correctly DIAGNOSE plant conditions based on control room indications?**

3	2	1
Diagnoses of plant conditions were accurate	Minor errors or difficulties in diagnosing conditions	Faulty diagnoses adversely affected plant status
		[.25 X = ]

**(d) Ensure that CORRECT and TIMELY DIAGNOSTIC ACTIVITIES were carried out by the CREW?**

3	2	1
Ensured effective diagnostic activities and diagnoses by crew	Minor errors or difficulties in diagnosing by crew	Faulty diagnostic activities by crew adversely affected plant status
		[.25 X = ]



ES-303

3

Form ES-303-4

**3. UNDERSTAND PLANT AND SYSTEM RESPONSE**

**DID THE APPLICANT:**

**(a) INTERPRET control room indicators correctly and efficiently to ascertain and verify the status and operation of plant systems?**

3

2

1

Accurate and efficient interpretation of instruments and displays

Minor errors in interpreting instruments and displays

Serious omissions, delays, or inaccuracies in interpreting instruments and displays

[.35 X = ]

**(b) Remain ATTENTIVE to control room indications?**

3

2

1

Regularly scanned indications; anticipated changes in plant conditions due to events in progress

Sporadically scanned indications; minor lapses in anticipating predictable changes

Rarely scanned indications; failed to anticipate predictable changes in plant status

[.20 X = ]

**(c) Demonstrate, through directives and actions, a thorough UNDERSTANDING of how the PLANT, SYSTEMS, and COMPONENTS OPERATE AND INTERACT (including set points, interlocks, and automatic actions)?**

3

2

1

Demonstrated thorough understanding of how systems and components operate and interact

Minor errors because of gaps in knowledge of how systems and components operate

Inadequate knowledge of system and component operation resulted in serious mistakes or plant degradation

[.45 X = ]

ES-303

4

Form ES-303-4

**4. COMPLIANCE WITH AND USE OF PROCEDURES**

**DID THE APPLICANT:**

**(a) REFER to correct procedures and procedural steps when appropriate?**

<b>3</b>	<b>2</b>	<b>1</b>
Requested or readily located all appropriate procedures as necessary	Minor lapses in referring to or locating appropriate procedures	Failed to correctly refer to procedures in important instances
		[.25 X = ]

**(b) USE PROCEDURES CORRECTLY, including following procedural steps in correct sequence, abiding by procedural cautions and limitations, selecting correct paths on decisions blocks, and correctly transitioning between procedures?**

<b>3</b>	<b>2</b>	<b>1</b>
Accurately and promptly executed procedural steps	Minor errors, but made necessary corrections in a timely fashion	Significant errors impeded or slowed recovery or degraded plant unnecessarily
		[.50 X = ]

**(c) Ensure the safe, efficient IMPLEMENTATION of procedures BY THE CREW?**

<b>3</b>	<b>2</b>	<b>1</b>
Kept crew informed of procedural status; got acknowledgment from crew when reading procedures	Crew occasionally had to question SRO regarding status; allowed lapses in implementation by crew	Read procedures to him/herself; failed to coordinate or verify crew's use of procedures
		[.25 X = ]

ES-303

5

Form ES-303-4

5. OPERATE THE CONTROL BOARDS

DID THE APPLICANT:

(a) LOCATE CONTROLS efficiently and accurately?

3

2

1

Promptly located appropriate controls in all instances

Some minor hesitancy or difficulty in locating controls

Unable to locate controls without assistance

[.25 X = ]

(b) MANIPULATE CONTROLS in an accurate and timely manner?

3

2

1

Manipulations were consistently accurate and timely

Minor shortcomings, but any resulting consequences were readily mitigated

Improper manipulations caused major system perturbations

[.25 X = ]

(c) ACT appropriately in response to INSTRUMENT READINGS?

3

2

1

Responses were appropriate and timely

Generally responsive, but some minor errors and lapses

Failed to react appropriately to instrument readings without assistance

[.25 X = ]

(d) Take MANUAL CONTROL of automatic functions when appropriate?

3

2

1

Took manual control as appropriate

Minor delays; some prompting necessary before overriding automatic functions

Depended on automatic actions; required prompting to take manual control

[.25 X = ]

ES-303

6

Form ES-303-4

6. COMMUNICATE AND INTERACT WITH THE CREW AND OTHER PERSONNEL

DID THE APPLICANT:

(a) Communicate in a clear, easily-understood manner?

3

2

1

Communications were timely, clear, and easy to hear and understand

At times, communications were confusing, hard to hear or understand

Communications were ill-timed, vague or difficult to hear or understand

[.45 X = ]

(b) Keep crew members and those outside the control room informed of plant status?

3

2

1

Provided others with accurate, pertinent information throughout scenarios

Had to be prompted for information in some minor instances; gave some incomplete or inaccurate information

Failed to provide important information

[.35 X = ]

(c) ENSURE RECEIPT of clear, easily-understood communications from crew and others?

3

2

1

Requested information or clarification when necessary; understood communications from others

Failed to require or acknowledge information from others

Failed to request needed information; inattentive when information was provided; failed to correct serious misunderstandings among crew members

[.20 X = ]

ES-303

7

Form ES-303-4

**7. DIRECT SHIFT OPERATIONS  
DID THE APPLICANT:**

**(a) Take TIMELY and DECISIVE ACTION when problems arose?**

3

2

1

Took early remedial action when necessary

Minor instances of failure to take action within a reasonable period of time

Failed to take timely action; resulted in deterioration of plant conditions

[.20 X = ]

**(b) Provide TIMELY, WELL THOUGHT OUT DIRECTIONS that facilitated CREW PERFORMANCE and demonstrated appropriate CONCERN for the SAFETY of the plant, staff, and public?**

3

2

1

Directives enabled safe, integrated crew performance

Minor instances of incorrect, trivial, or difficult-to-carry-out orders

Directives inhibited safe performance; crew had to explain why orders could not or should not be followed

[.40 X = ]

**(c) Stay In a position of OVERSIGHT and provide an APPROPRIATE AMOUNT of DIRECTION and GUIDANCE?**

3

2

1

Stayed involved but not intrusive; anticipated crew's needs and provided guidance when necessary

Crew occasionally had to request assistance, which interfered with their ability to carry out actions

Lost the big picture; crew had to repeatedly request or provide guidance; failed to verify that directives were correctly implemented

[.20 X = ]

**(d) SOLICIT and INCORPORATE FEEDBACK from the crew to foster an effective, team-oriented approach to problem solving and decision making?**

3

2

1

Involved crew in problem-solving process as appropriate leading to effective team decision making

At times, failed to involve crew in decision making when it would have been appropriate, detracting from team-oriented approach

Made decisions without crew participation or consultation; crew divisiveness was counter productive

[.20 X = ]

ES-303

8

Form ES-303-4

**8. COMPLY WITH AND USE TECHNICAL SPECIFICATIONS**

**DID THE APPLICANT:**

**(a) RECOGNIZE when conditions were covered by technical specifications (TS)?**

3

2

1

Recognized TS limiting conditions for operation and action statements without use of references

Minor errors and misunderstandings with respect to TS applications

Failed to correctly recognize situations covered by TS and action statements

[.40 X = ]

**(b) LOCATE the appropriate technical specifications quickly and efficiently?**

3

2

1

Located applicable TS quickly and accurately

Had difficulty locating TS; had to search through index and body of document

Could not locate appropriate TS

[.20 X = ]

**(c) Ensure correct COMPLIANCE with technical specifications and limiting condition for operation action statements?**

3

2

1

Directives were based on correct understanding of TS action statements

Needed some assistance from crew to ensure compliance

Applied incorrect TS to situation; allowed crew to violate TS

[.40 X = ]