



Console Specific Shift Change Process

Summary This work process standardizes the console specific shift exchange of operations information between Sr. Transmission Coordinators, Transmission Coordinators and Gas System Operators starting and ending shifts in Gas Transmission Control Center (GTCC).

Target Audience Gas System Operations, GTCC: GTCC Manager, GTCC Supervisor, Senior Transmission Coordinators, Transmission Coordinators, Gas System Operators

Safety This process will outline roles and responsibilities to ensure control room personnel are provided with information, tools and training needed to operate PG&E's pipeline system safely.

Before You Start Qualifications: Senior Transmission Coordinators, Transmission Coordinators and Gas System Operators are to complete Operator Qualification ASME B31Q for required tasks. (monitoring, remote open/close valves, start/stop compressors)

Training: Senior Transmission Coordinators, Transmission Coordinators and Gas System Operators will complete all training as detailed in TD4436P-06, GTCC Training Procedure.



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Detailed Process

GTCC Control Room Management Operations Manual includes the following:

- GTCC Console Specific Shift Change Process is located in Section 2 of the GTCC Control Room Operations Manual.

1 Initiating Console Specific Shift Change Process

1.1 Each console is required to complete an electronic Console Specific Shift Change Checklist, located on the [GTCC SharePoint site](#) following the Console Specific Shift Change Process.

1. Senior TC console will have an electronic Console Specific Shift Change Checklist for all shifts worked.
2. Transmission Coordinators console will have an electronic Console Specific Shift Change Checklist for all shifts worked.
3. The Northern and Southern GSO consoles, will have an electronic Console Specific Shift Change Checklists for all shifts worked.
4. The GSO Support Console is required to participate in the Northern and Southern GSO console shift changes.
5. Senior TCs, TCs, and GSOs on shift will initiate the shift change process and complete the Console Specific Shift Change Checklist for the incoming shift workers accepting responsibility for operations of the gas system.
6. The outgoing shift will complete the electronic Console Specific Shift Change Checklist, and assign the checklist for review and approval to the incoming shift. The incoming shift will log in to the GTCC SharePoint site and open the electronic Console Specific Shift Change Checklist assigned to them
 - (1) The outgoing shift will provide a shift briefing to include all items on the assigned electronic Console Specific Shift Change Checklist
 - (2) Once the shift briefing is complete, the incoming shift will approve and accept responsibility of the shift
 - *The transfer is not complete until the incoming shift has approved the electronic Shift Change Checklist, which includes the outgoing shift logging off of Citect.*
 - *The outgoing shift may not leave until they have confirmed that this has been approved.*



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7. Outgoing personnel on shift will manage distractions, the phones and other communications and acknowledge and respond to alarms, until the shift change is complete.
8. When system conditions allow, after all of the incoming personnel have assumed responsibility for their consoles, the Senior TC will conduct a shift summary update, ensuring that all personnel share the information exchanged in their individual shift exchanges.
9. On the electronic Shift Change, there is a **"No Change"** option that will be selected when the status of the shift change item does not require discussion.
10. When an employee is unable to continue or assume responsibility for any reason, the following must be adhered to:
 - a. If an employee on-shift notifies management that they are unable to perform their responsibilities, or are unfit for duty, a shift change will take place between that employee and an alternate qualified on-shift employee operating another console.
 - (1) Management will determine the need to fill the shift and use the Shift Work Scheduling Process to meet staffing needs.
 - (2) The information gathered from the alternate qualified on-shift employee will then be provided to the incoming employee, using the Console Specific Shift Change Process.
 - b. If an incoming employee notifies management that they will be unable to perform their responsibilities, or are unfit for duty, management will determine the need to fill the shift and use the Shift Work Scheduling Process to meet staffing needs.
 - (1) If the Shift Work Scheduling Process is used to replace the incoming employee that was unable to perform their responsibilities, or unfit for duty, a shift change will take place between the new incoming employee and the current personnel responsible for the console.
 - c. If the incoming employee for the Senior TC, TC, or TC Support Console is expected to arrive late, a shift change may take place between the outgoing employee and an alternate qualified on-shift employee operating another console.



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- (1) The information gathered from the alternate qualified on-shift employee will then be provided to the incoming employee, arriving late, using the electronic Console Specific Shift Change Process.
- d. If the incoming employee for the Northern, Southern or GSO Support Console is expected to arrive late, a shift change may take place between the outgoing employee and an alternate on-shift employee operating another console.
 - (1) The information gathered from the alternate on-shift employee will then be provided to the incoming employee, arriving late, using the Console Specific Shift Change Process.

1.2 Senior TC Console Specific Shift Change

The following items are included in the Senior TC Shift Change Checklist. Each item must be acknowledged and completed during the shift change. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Senior Transmission Coordinators, system conditions allowing, will discuss "individual briefings" of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during each shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the *Information Update* (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods.

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change may not leave until the incoming employee reviews and approves the completed electronic Console Specific Shift Change Checklist.

1. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
 - a. *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
2. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)



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- a. Include significant plan deviations, due to system load, composite temperature deviations from forecast, interconnect supply status or other system activities.
 - b. Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.
 - c. Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [*See Emergency Plan Manual*] contact information.
 - d. PG&E Storage Activity Briefing - PG&E storage capacity for Injection and Withdrawal, maintenance issues, constraints.
 - e. Third Party Storage Activity Briefing – Current and target deliveries for operating period based on scheduled volumes.
 - f. Electric Generation - Cal ISO, power plants, include third party generators, Demand Bid participation, SMUD, peak demand charges.
 - g. Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - h. Temporary operating configurations.
3. Review Alarm Summary and discuss current alarms. Discuss all alarm exceptions and all relevant documentation captured in Alarm Manager during the shift and all disabled alarms. Note temporary alarms for clearance work.
 - a. Disabled or inhibited alarms
 - b. Alarm limit changes
 - c. SCADA system changes
 4. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
 5. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
 6. Discuss Model Reports for the day. Identify changes to next model runs which should be made prior to running them.



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7. Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
8. Communicate on-call list changes. Identify supervision changes. Identify Gas Quality On-call changes, Market Center weekend On-Call representative, and GTCC On-Call supervisor.
9. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
10. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
11. Discuss manned stations operations and identify follow up issues for next shift to discuss.
12. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
13. Discuss Electronic Master Clearance Board and identify any necessary updates needed.
14. Discuss Gas Quality and Therm Billing status (Wednesday through Friday.)
15. Review new or revised control room plans or process.
16. Shift leaving logs off Citect, shift arriving logs onto Citect.

1.3 TC Console Specific Shift Change

The following items are included in the Transmission Coordinator Shift Change Checklist. Each item must be acknowledged and completed during the shift change.

The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Transmission Coordinators, system conditions allowing, will discuss "individual briefings" of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods.



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The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change may not leave until the incoming employee reviews and approves the completed electronic Console Specific Shift Change Checklist.

1. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
 - a. *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
2. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station settings, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
 - a. Include significant plan deviations, due to system load, composite temperature deviations from forecast, interconnect supply status or other system activities.
 - b. Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.
 - c. Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information.
 - d. PG&E Storage Activity Briefing - PG&E storage capacity for Injection and Withdrawal, maintenance issues, constraints.
 - e. Third Party Storage Activity Briefing – Current and target deliveries for operating period based on scheduled volumes.
 - f. Electric Generation - Cal ISO, power plants, include third party generators, Demand Bid participation, SMUD, electric compressor usage and peak demand charges.
 - g. Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - h. Temporary operating configurations and temporary alarm settings.
3. Review Alarm Summary and discuss current alarms. Discuss all alarm exceptions or all relevant documentation captured in Alarm Manager during the shift and all disabled alarms. Note temporary alarms for clearance work.
 - a. Disabled or inhibited alarms



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- b. Alarm limit changes
- c. SCADA system changes
4. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
5. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
6. Discuss Model Reports for the day. Identify changes to next model runs which should be made prior to running them.
7. Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
8. Communicate on-call list changes. Identify supervision changes. Identify Gas Quality On-call changes, Market Center weekend On-Call representative, and GTCC On-Call supervisor.
9. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
10. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
11. Discuss manned stations operations and identify follow up issues for next shift to discuss.
12. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
13. Discuss Electronic Master Clearance Board and identify any necessary updates needed.
14. Discuss Gas Quality and Therm Billing status (Wednesday through Friday.)
15. Review new or revised control room plans or process.
16. Shift leaving logs off Citect, shift arriving logs onto Citect

1.4 GSO Console Specific Shift Change (Day Shift)

NOTE



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During the weekday shifts, the GSO Support Console, must brief the incoming Night Shift, Northern and Southern GSOs, and review and approve completed shift change checklists. See *Tables 1, 2, 3 and 4 in the Appendices for the Console Specific Shift Change Matrix.*

It should be noted that the Northern and Southern Day Shift GSO must still brief their respective console shift reliefs individually:

1. The Northern Area Night Shift GSO must be briefed by both Northern Area Day Shift GSO *and the GSO Support Console, prior to completing the shift change.*
2. The Southern Area Night Shift GSO must be briefed by both Southern Area Day Shift GSO *and the GSO Support Console, prior to completing the shift change.*

1. Northern GSO Console Specific Shift Change – Monday through Friday Day Shift

The following items are included in the Northern GSO Shift Change Checklist. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Gas System Operators, system conditions allowing, will discuss “individual briefings” of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods..

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change may not leave until the incoming employee reviews and approves the completed electronic Console Specific Shift Change Checklist.



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- a. Northern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
 - (1) Burney
 - (2) Willows
 - (3) Meridian
 - (4) Los Medanos
 - (5) Rio Vista
 - (6) Tracy
 - b. Northern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Divisions:
 - (1) Sacramento
 - (2) Humboldt
 - (3) Santa Rosa
 - (4) Sierra
 - (5) North Valley
 - (6) Diablo
 - (7) North Bay
2. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows::**
- a. *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
 - b. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
 - (1) Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.



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- (2) Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information.
 - (3) Electric Generation - Power plants, include third party generators, electric compressor usage and peak demand charges.
 - (4) Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - (5) Temporary operating configurations.
- c. Review Alarm Summary and discuss current alarms. Note any alarm exceptions and disabled alarms. Note temporary alarms for clearance work.
- (1) Disabled or inhibited alarms
 - (2) Alarm limit changes
 - (3) SCADA system changes
- d. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
- e. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
- f. Discuss Electronic Master Clearance Board and Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
- g. Communicate on-call list changes. Identify supervision changes.
- h. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
- i. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
- j. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
- k. Review new or revised control room plans or process.



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- I. Shift leaving logs off Citect, shift arriving logs onto Citect.
3. GSO GTCC Support Console Specific Shift Change – Monday through Friday Day Shift

The following items are included in the GTCC Support Console Shift Change Checklist. Each item must be acknowledged and completed during the shift change. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Gas System Operators, system conditions allowing, will discuss “individual briefings” of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation. All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods..

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change is not released until the incoming employee accepts and signs their Console Specific Shift Change Checklist.

- a. GSO GTCC Support Console must brief *both* incoming Night Shift Northern and Southern GSOs, to complete the shift change checklist. The Northern and Southern GSOs must review and approve the GSO GTCC Support Console Checklist, completing the shift change. They are responsible for discussing all of the items listed below which they have direct knowledge, including any outstanding communications, alarms or operational knowledge they have.
- b. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
 - (1) *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
- c. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
 - (1) Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.



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- (2) Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information. (ARM to Revise)
 - (3) Electric Generation- Power plants, including third party generators, electric compressor usage and peak demand charges.
 - (4) Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - (5) Temporary operating configurations and temporary alarm settings.
- d. Review Alarm Summary and discuss current alarms. Note any alarm exceptions and disabled alarms. Note temporary alarms for clearance work.
- (1) Disabled or inhibited alarms
 - (2) Alarm limit changes
 - (3) SCADA system changes
- e. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
- f. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
- g. Discuss Electronic Master Clearance Board and Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
- h. Communicate on-call list changes. Identify supervision changes.
- i. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
- j. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
- k. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
- l. Review new or revised control room plans or process.



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- m. Shift leaving logs off Citect, shift arriving logs onto Citect.
4. Southern GSO Console Specific Shift Change – Monday through Friday Day Shift

The following items are included in the GTCC Southern GSO Console Shift Change Checklist. Each item must be acknowledged and completed during the shift change. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Gas System Operators, system conditions allowing, will discuss “individual briefings” of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods..

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change is not released until the incoming employee reviews and approves completed electronic Console Specific Shift Change Checklist.

- a. Southern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
 - (1) Milpitas / Hollister
 - (2) Topock
 - (3) Hinkley
 - (4) Kettleman
- b. Southern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
 - (1) Peninsula
 - (2) Mission
 - (3) East Bay
 - (4) San Francisco
 - (5) Central Coast



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- (6) DeAnza
 - (7) San Jose
 - (8) Stockton
 - (9) Yosemite
 - (10) Fresno
 - (11) Kern
- c. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
- (1) *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
- d. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
- (1) Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.
 - (2) Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information.
 - (3) Electric Generation - Power plants, including third party generators, electric compressor usage and peak demand charges.
 - (4) Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - (5) Temporary operating configurations and temporary alarm settings.
- e. Review Alarm Summary and discuss current alarms. Note any alarm exceptions and disabled alarms. Note temporary alarms for clearance work.
- (1) Disabled or inhibited alarms
 - (2) Alarm limit changes



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- (3) SCADA system changes
- f. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
 - g. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
 - h. Discuss Electronic Master Clearance Board and Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed. .
 - i. Communicate on-call list changes. Identify supervision changes.
 - j. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
 - k. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
 - l. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
 - m. Review new or revised control room plans or process.
 - n. Shift leaving logs off Citect, shift arriving logs onto Citect.

1.5 GSO Console Specific Shift Change (Night Shift and Weekends)

NOTE

At the end of a Sunday through Thursday Night Shift, the Night Shift Northern Area GSO and the Southern Area GSO must *both* brief the incoming Day Shift GSO that is assuming responsibility for the GTCC Support Console. The GSO Support Console once fully briefed must review and approve *both the* Northern Area GSO and Southern Area GSO's shift change checklists, completing the shift change process. *See Tables 1, 2, 3 and 4 in the Appendices for the Console Specific Shift Change Matrix.*



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It should be noted that the Northern Area and Southern Area Night Shift GSOs, working Sunday through Thursday, must *still* brief their respective console shift reliefs individually. They may NOT leave the GTCC room until both shift changes take place. For example:

1. The Northern Area Night Shift GSO will perform a shift change with the Northern Area Day Shift GSO *and the GSO Support Console, prior, to completing the shift change.*
2. The Southern Area Night Shift GSO will perform a shift change with the Southern Area Day Shift GSO *and the GSO Support Console, prior, to completing the shift change.,*

1. Northern GSO Console Specific Shift Change – Nights and Weekends

The following items are included in the GTCC Northern GSO Console Shift Change Checklist for Nights and Weekends. Each item must be acknowledged and completed during the shift change. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Gas System Operators, system conditions allowing, will discuss “individual briefings” of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods..

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change is not released until the incoming employee reviews and approves completed electronic Console Specific Shift Change Checklist.

- a. Northern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:



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- (1) Burney
 - (2) Willows
 - (3) Meridian
 - (4) Los Medanos
 - (5) Rio Vista
 - (6) Tracy
- b. Northern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
- (1) Sacramento
 - (2) Humboldt
 - (3) Santa Rosa
 - (4) Sierra
 - (5) North Valley
 - (6) Diablo
 - (7) North Bay
- c. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
- (1) *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
- d. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
- (1) Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.



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- (2) Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information.
 - (3) Electric Generation - Power plants, include third party generators, electric compressor usage and peak demand charges.
 - (4) Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - (5) Temporary operating configurations and temporary alarm settings.
- e. Review Alarm Summary and discuss current alarms. Note any alarm exceptions and disabled alarms. Note temporary alarms for clearance work.
- (1) Disabled or inhibited alarms
 - (2) Alarm limit changes
 - (3) SCADA system changes
- f. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
- g. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
- h. Discuss Electronic Master Clearance Board and Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
- i. Communicate on-call list changes. Identify supervision changes.
- j. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
- k. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
- l. Discuss all updates to the shift summaries. Specify individual items which have
- m. Review new or revised control room plans or process.



Console Specific Shift Change Process

- n. Shift leaving logs off Citect, shift arriving logs onto Citect.

2. Southern GSO Console Specific Shift Change – Nights and Weekends

The following items are included in the GTCC Southern GSO Console Shift Change Checklist for Nights and Weekends. Each item must be acknowledged and completed during the shift change. The outgoing employee will logoff of Citect and complete the electronic shift change document. The incoming employee will log into UDN and access the [GTCC SharePoint site](#) to review and approve the completed outgoing [Console Specific Shift Change Checklist](#).

The Gas System Operators, system conditions allowing, will discuss “individual briefings” of all GTCC personnel on shift ensuring that all checklist items are discussed, understood, reviewed and approved in confirmation.

All operating orders that have been initiated, but not completed, will be identified and discussed during the shift change. Prior to breaks or lunches, all operating orders that have been initiated, but not completed, will be identified and discussed during the Information Update (See Section 2, titled Information Updates during Shifts), which transfers responsibility for meal and break periods.

The incoming employee is ultimately responsible for accepting the shift. The employee performing the shift change is not released until the incoming employee reviews and approves completed electronic Console Specific Shift Change Checklist.

- a. Southern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
 - (1) Milpitas / Hollister
 - (2) Topock
 - (3) Hinkley
 - (4) Kettleman
- b. Southern Area GSO Console is responsible for all monitoring, communications, operations and documentation for the following Maintenance Districts:
 - (1) Peninsula
 - (2) Mission
 - (3) East Bay
 - (4) San Francisco



Console Specific Shift Change Process

- (5) Central Coast
 - (6) Deanza
 - (7) San Jose
 - (8) Stockton
 - (9) Yosemite
 - (10) Fresno
 - (11) Kern
- c. **The incoming employee will confirm that they are fit to assume the responsibilities of their console, on the electronic Console Specific Shift Change Checklist. The declaration is as follows:**
- (1) *I am adequately rested to assume my shift responsibilities as required by CRM 192.631 (d), Fatigue Mitigation and am Fit for Duty, per the company Fitness for Duty Policy.*
- d. Shift exchange briefing, discussion of system operations (routing, compression, Design Day criteria, key station setpoints, rates, inventory levels and placement, third party storage activity, MOP changes, unusual operations, etc.)
- (1) Discussion of the Senior Transmission Coordinator Daily Plan to manage system inventory based on supply, demand, weather, equipment outages, OFOs, EFOs and other system activities.
 - (2) Abnormal and Emergency Operating Conditions - discuss equipment failures, reports to outside agencies, gas quality upsets, major routing changes, pipeline/facility emergencies, CPUC Reportable Incident reports and Incident Command Leader [See *Emergency Plan Manual*] contact information. Electric Generation - Power plants, including third party generators, electric compressor usage and peak demand charges.
 - (3) Discuss changes of status at major stations – include compression, regulation and monitor set point changes made by GTCC and field crews.
 - (4) Temporary operating configurations and temporary alarm settings.
- e. Review Alarm Summary and discuss current alarms. Note any alarm exceptions and disabled alarms. Note temporary alarms for clearance work.
- (1) Disabled or inhibited alarms



Console Specific Shift Change Process

- (2) Alarm limit changes
- (3) SCADA system changes
- f. Discuss any problem alarms. Identify active alarms, related equipment or communication issues. Update on maintenance follow up status. Identify follow up actions required by next shift.
- g. Verify alarm audible is in working condition at each station. Verify keyboards, mice & screens are in working condition.
- h. Discuss Electronic Master Clearance Board and Identify active and next day clearances. Identify work locations, operational system changes and setups, crews still on site or crew arrival times, etc. Identify Emergency Clearances to be reviewed and posted. Identify clearance cover sheets to be reviewed.
- i. Communicate on-call list changes. Identify supervision changes.
- j. Identify Gas Logging System entries and any communications of special importance. Discuss e-mails noting upcoming operations, policy changes, Btu events, Gas Incidents, department announcements, etc.
- k. Update of ETOR of malfunctioning equipment. Note follow up efforts made while on shift or needed on next shift. Identify e-mail regarding issues.
- l. Discuss all updates to the shift summaries. Specify individual items which have changed, been removed or need follow up.
- m. Review new or revised control room plans or process.
- n. Shift leaving logs off Citect, shift arriving logs onto Citect.



Console Specific Shift Change Process

2 Information Updates during Shifts

1. When GTCC personnel must temporarily leave their console, an information update will be performed.
 - a. At all times there must be at least one Senior TC or TC in the control room. A Senior TC or TC leaving the control room must perform an information update.
 - b. On day shifts, only one of the three GSOs, either the Northern, Southern or Support Console may temporarily leave their console (i.e. breaks or lunches) after performing an information update.
 - c. On night shifts and weekends, one of the two GSOs, either the Northern or Southern Consoles may temporarily leave their console after performing the *Information Update*.
2. When Senior TCs, TCs and GSOs temporarily leave their workstation (meals, breaks, etc.), they will provide an information briefing to the designated personnel that will assume the responsibilities of the employee leaving. For GSOs, all outstanding orders not requiring a series of operations will be completed prior to taking lunches or breaks. Any orders requiring a series of operations, such as station re-routings, raising the pressure in a line by a large amount (i.e. raising the pressure in a line by 100 psig), or system changes for clearance work, that have been initiated, but not completed, will be identified and discussed during the *Information Update*. This information is required prior to transferring responsibility of the operations for meal and break periods. This information will include:
 - a. Current Operational Orders
 - b. Current Alarms Received and being managed
 - c. Active Gas Clearance Work (description of work, location, personnel, system impacts)
 - d. Communications (anticipated calls, GLS messages, faxes, e-mails)

3 Shift Change Checklist Process Review

1. The Gas System Supervisor, or designee, will manage periodic monthly reviews, at a minimum of twice per month, to ensure that the Console Specific Shift Change Process is being followed and the checklists are being completed thoroughly. These reviews will be documented and archived on the Shift Change Checklist Process Review Tracking Log.

4 Alternate GTCC Relocation Plan



Console Specific Shift Change Process

4.1 When transferring responsibility through a shift change under the Alternate GTCC Relocation Plan, each console will be responsible for documenting the shift change at their respective locations. The process will be completed as outlined in this document, however, each console will electronically review and approve the shift change checklist and assign the name of the Senior TC, TC or GSO they are either transferring the shift to or they are receiving the shift from.

5 Roles and Responsibilities

a. GTCC Manager

- (1) Oversee the overall execution, annual review and maintenance of the Console Specific Shift Change Process.

b. GTCC Supervisor

- (1) Ensure Console Specific Shift Change Process is implemented and maintained.
- (2) Review Console Specific Shift Change Process annually for effectiveness.



Console Specific Shift Change Process

6 Recordkeeping

See TD-4436S, "Gas System Operations Control Room Management Standard," Section 10, "Recordkeeping," for recordkeeping instructions.

1. *Senior TCs, TCs and GSOs are required to retain all completed Shift Change Checklists in their corresponding Console Specific binders.*

[INSTRUCTION for Cautions and Warnings - Use the automated toolbar to format the caution or warning then copy and paste the appropriate symbol below in front of the word.



[ = CAUTION or  = WARNING]



END of Instructions



Console Specific Shift Change Process

Definitions Console Specific Shift Change: Control Room Management requires implementation of a console specific shift change process to record shift changes when the responsibility for pipeline operations is transferred from one group of GTCC employees to another, specific to the console which includes defined roles and responsibilities designated by geographic areas. This process defines the content of information to be exchanged during the shift change.

Implementation Responsibilities Manager of GTCC

- PowerPoint Training, Tailboards

Governing Document Utility Standard: Gas System Operations Control Room #:TD-4436S

Compliance Requirement/Regulatory Commitment CFR 49 192.631, Control Room Management Rule

Reference Documents **Developmental References:**

Supplemental References:

Appendices Table 1: Console Specific Shift Change Matrix

Table 2: Day Shift Transferring to Night Shift

Table 3: Night Shift Transferring to Day Shift

Table 4: GSO Console Specific Shift Change (Weekend and Holiday)

Attachments Console Specific Shift Change Checklist



Console Specific Shift Change Process

**Document
Revision** Not applicable, this is a new document.

Approved By Manager GTCC

Document Owners Senior Operations Specialist

**Document
Contact** Senior Operations Specialist



Console Specific Shift Change Process

MOC Tracking and Revision Notes			
Date	Rev #	Comments	Approved By
10/13/11	1	No change to content. Updated formatting per template and rolled out with new tailboard.	Redacted
10/19/11	2	Sections 1.4 and 1.7, subsections 2c (in each) - Added Santa Rosa Division to the Northern GSO Consoles	
3/28/12	3	3/28 Sections 1.4 and 1.7, subsections 2c (in each) - Added Los Medanos to the Northern GSO Consoles and updated language to ensure that Console Specific Shift changes occurred, per the Matrix in Table 1.	
6/4/12	4	Sections 2.1.1.9, 2.4.1 - Added requirement of No Change/NC Added requirement of retaining copies of shift change checklists in console specific binders	
6/26/12	5	Added PowerPoint Training	
7/23/12	6	Updated language for Fit for Duty Statement and removed individual shift change checklist for GSO Support Console	
7/26/12	7	Annual Review and update to Table 2 in Appendix	
8/1/12	8	Updated language reflecting shift change monthly review(s) and built tracker	



Console Specific Shift Change Process

11/16/12	9	<p>Added language in Section 2, Information Updates for the following:</p> <ul style="list-style-type: none"> - providing guidance on the amount of GTCC personnel allowed to leave consoles in the control room at a time. - providing direction on leaving the control room when operational orders have been initiated. <p>Also inserted section 4 regarding the Alternate GTCC Relocation Plan, requiring all Senior TCs, TCs and GSOs to complete their own Console Specific Shift Change Checklist at their respective locations, signing them, and printing the name of the individual they are transferring to or from.</p>	<p>Redacted</p>
4/23/13	10	<ul style="list-style-type: none"> • Updated language for the Senior TC Shift Change – and made it consistent for TC, GSO North & South, and GSO Support • Verified name of SAP tools Electronic Master Clearance Board with Robert • Added SharePoint links • Section 4 that addresses the AGTCC Relocation Plan might need to be reworded. • The numbering is still a little messed up but we will be able to fix that once we accept changes. 	<p>Redacted</p>



Console Specific Shift Change Process

APPENDIX NUMBER AND TITLE

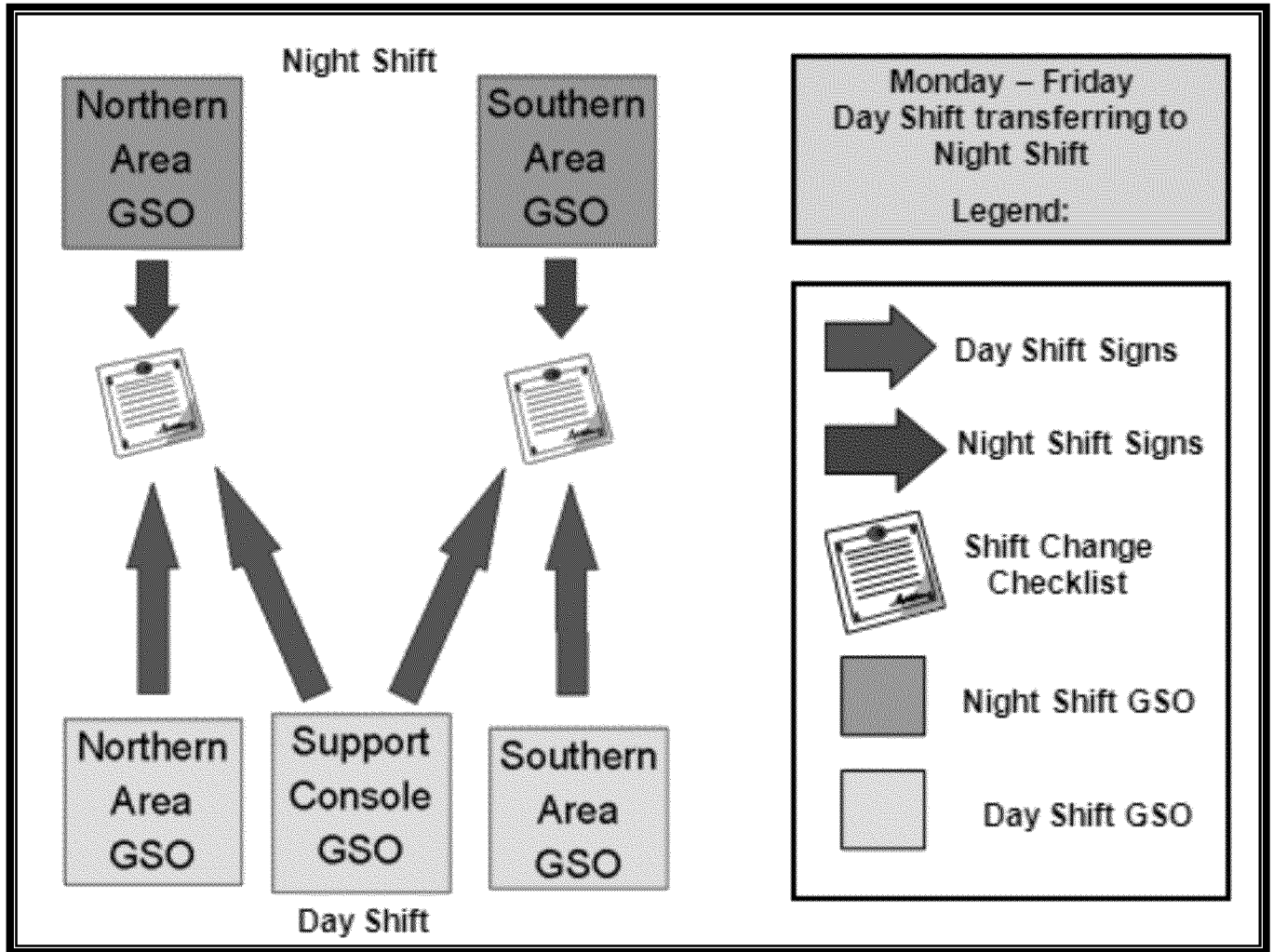
Table 1: Console Specific Shift Change Matrix

GSO Console Specific Shift Change Matrix (Sunday - Thursday)		
X = Shift Change Briefing Required		
	Night Shift	
	Northern Area GSO	Southern Area GSO
Day Shift		
Northern Area GSO	X	
GSO Suport Console	X	X
Southern Area GSO		X



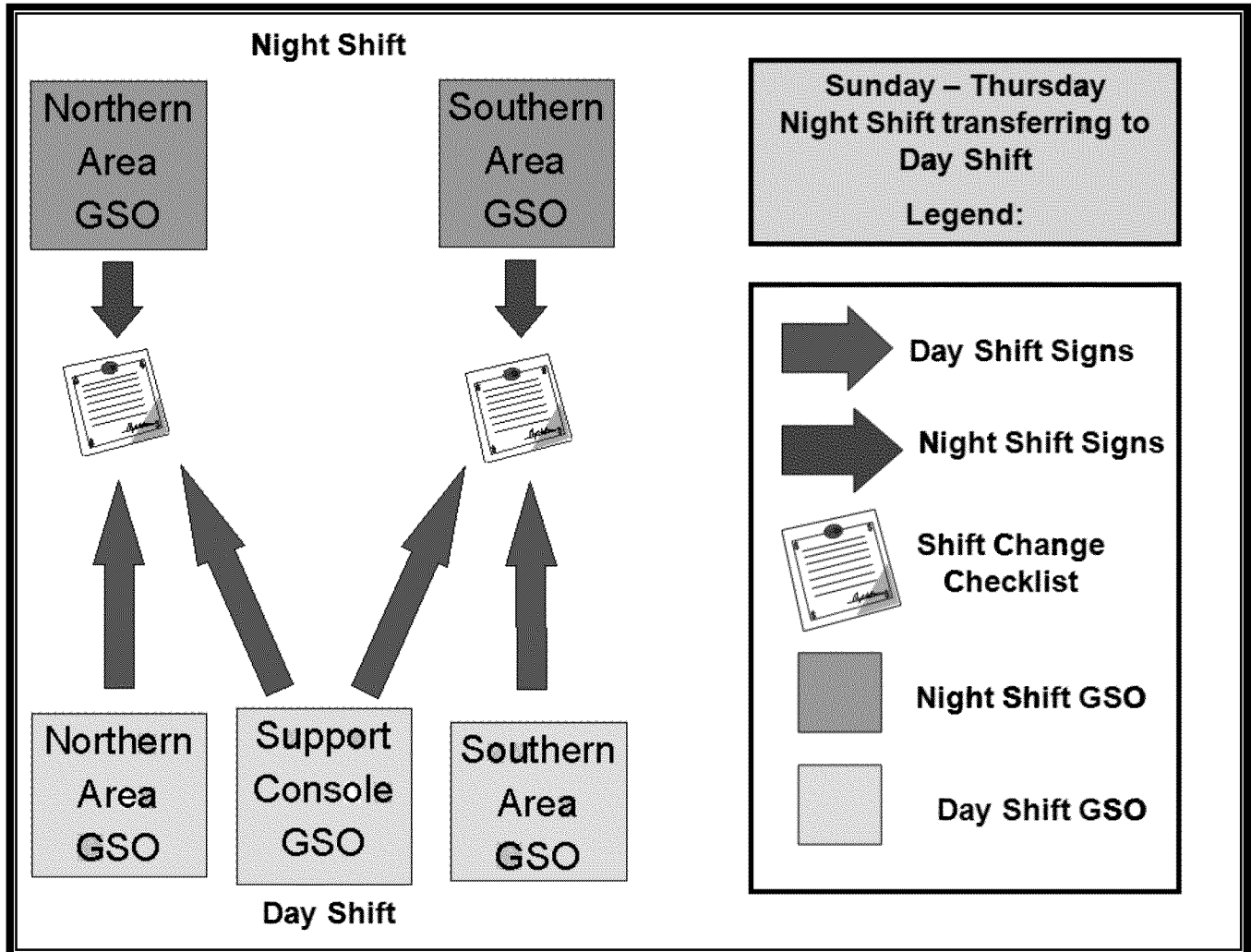
Console Specific Shift Change Process

Table 2: GSO Console Specific Shift Change (Day Shift Transferring to Night Shift)



Console Specific Shift Change Process

Table 3: GSO Console Specific Shift Change (Night Shift Transferring to Day Shift)





Console Specific Shift Change Process

Table 4: GSO Console Specific Shift Change (Weekend and Holiday)

