ENCLOSURE 2

CATAWBA NUCLEAR STATION

CHANGES TO ITS SUBMITTAL

CHANGES TO CATAWBA ITS SUBMITTAL

1. ITS Bases for Surveillance Requirement 3.6.8.2 incorrectly states that verifying the hydrogen skimmer system fan motor current at rated speed with the motor operated suction valves closed is indicative of overall fan motor performance and system flow. "and system flow" has been deleted since the valves are closed. ITS Bases SR 3.6.8.2 is corrected to describe verifying the fan motor current at rated speed with the valves closed is indicative of overall fan motor performance.

2. ITS Surveillance Requirement 3.6.8.3 incorrectly requires that the hydrogen skimmer fans be started upon receipt of an actuation signal from the Containment Pressure Control System (CPCS). The current technical specifications only requires that the fans be demonstrated to receive a start permissive signal. The start permissive signal at Catawba for these fans is from the fan damper opening. Additionally, for ice condenser containments, it is undesirable to start fans which would recirculate air within containment and potentially open the ice condenser inlet doors. The SR is revised to be consistent with current technical specification requirements. ITS Bases 3.3.2, ESFAS Instrumentation is corrected to describe the appropriate system description for fans start permissives.

3. Special Test Exceptions CTS 3.10.5 for Position Indication System – Shutdown was incorrectly shown in the CTS markup for ITS 3.1.8 as being deleted (DOC A26). This LCO provides an exception during testing for the rod position indication system during shutdown. The rod position system LCO, CTS 3.1.3.3, was previously relocated to the Selected Licensee Commitments Manual (UFSAR Chapter 16). Discussion of Change R7 is revised to indicate that the associated test exception, CTS 3.10.5, is also relocated to the Selected Licensee Commitments Manual.

4. In Supplement 9 of September 8, 1998, a discussion of change (DOCs) for ITS Section 3.7, page R-2 was submitted. This page added information which, upon printing, repaginated the text. The enclosed page R-3 corrects the repagination for this discussion of change.

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

Since T_{avg} is used as an indication of bulk RCS temperature, this Function meets redundancy requirements with one OPERABLE channel in each loop. These channels are used in two-out-of-four logic. This Function must be OPERABLE in MODES 1, 2, and 3 when a secondary side break or stuck open valve could result in the rapid depressurization of the steam lines. This Function does not have to be OPERABLE in MODE 4, 5, or 6 because there is insufficient energy in the secondary side of the unit to have an accident.

9. Containment Pressure Control System Permissives

The Containment Pressure Control System (CPCS) protects the Containment Building from excessive depressurization by preventing inadvertent actuation or continuous operation of the Containment Spray and Containment Air Return Systems when containment pressure is at or less than the CPCS permissive setpoint. The control scheme of CPCS is comprised of eight independent control circuits (4 per train), each having a separate and independent pressure transmitter and current alarm module. Each pressure transmitter monitors the containment pressure and provides input to its respective current alarm. The current alarms are set to inhibit or terminate containment spray and containment air return systems when containment pressure falls to or below 0.25 psig. The alarm modules switch back to the permissive state (allowing the systems to operate) when containment pressure is greater than or equal to 0.45 psig.

This function must be OPERABLE in MODES 1, 2, 3, and 4 when there is sufficient energy in the primary and secondary sides to pressurize containment following a pipe break. In MODES 5 and 6, there is insufficient energy in the primary and secondary sides to significantly pressurize the containment.

10. Nuclear Service Water System Suction Transfer – Low Pit Level

Upon an emergency low pit level signal from either NSWS pit, interlocks isolate the NSWS from Lake Wylie, align NSWS to the standby nuclear service water pond, close particular crossover

ACTIONS (continued)

O.1, O.2.1 and O.2.2

Condition O applies to the P-11 and P-12 interlocks.

With one channel inoperable, the operator must verify that the interlock is in the required state for the existing unit condition. This action manually accomplishes the function of the interlock. Determination must be made within 1 hour. The 1 hour Completion Time is equal to the time allowed by LCO 3.0.3 to initiate shutdown actions in the event of a complete loss of ESFAS function. If the interlock is not in the required state (or placed in the required state) for the existing unit condition, the unit must be placed in MODE 3 within the next 6 hours and MODE 4 within the following 6 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Placing the unit in MODE 4 removes all requirements for OPERABILITY of these interlocks.

P.1

Condition P applies to the Containment Pressure Control System Start and Terminate Permissives.

With one or more channels inoperable, the affected containment spray and containment air return systems components must be declared inoperable immediately. The supported system LCOs provide the appropriate Required Actions and Completion Times for the equipment made inoperable by the inoperable channel. The immediate Completion Time is appropriate since the inoperable channel could prevent the supported equipment from starting when required. Additionally, protection from an inadvertent actuation may not be provided if the terminate function is not OPERABLE.

Q.1, Q.2.1, and Q.2.2

With one channel of NSWS Suction Transfer - Low Pit Level inoperable in one or more NSWS pits, 4 hours are allowed to restore the channel to OPERABLE status or to place it in the tripped condition. The failure of one channel places the Function in a two-out-of-two configuration. The

INSERT 5

9. Containment Pressure Control System Permissives

The Containment Pressure Control System (CPCS) protects the Containment Building from excessive depressurization by preventing inadvertent actuation or continuous operation of the Containment Spray and Containment Air Return Systems when containment pressure is at or less than the CPCS permissive setpoint. The control scheme of CPCS is comprised of eight independent control circuits (4 per train), each having a separate and independent pressure transmitter and current alarm module. Each pressure transmitter monitors the containment pressure and provides input to its respective current alarm. The current alarms are set to inhibit or terminate containment spray and containment air return systems when containment pressure falls to or below 0.25 psig. The alarm modules switch back to the permissive state (allowing the systems to operate) when containment pressure is greater than or equal to 0.45 psig.

This function must be OPERABLE in MODES 1, 2, 3, and 4 when there is sufficient energy in the primary and secondary sides to pressurize containment following a pipe break. In MODES 5 and 6, there is insufficient energy in the primary and secondary sides to significantly pressurize the containment.

10. Nuclear Service Water System Suction Transfer - Low Pit Level

Upon an emergency low pit level signal from either NSWS pit, interlocks isolate the NSWS from Lake Wylie, align NSWS to the standby nuclear service water pond, close particular crossover valves, and start the NSWS pumps. This function is initiated on a two-out-of-three logic from either NSWS pump pit.

This function must be OPERABLE in MODES 1, 2, 3, and 4 to ensure cooling water remains available to essential components during a DBA. In MODES 5 and 6, the sufficient time exists for manual operator action to realign the NSWS pump suction, if required.

INSERT 5

P.1

Condition P applies to the Containment Pressure Control System Start and Terminate Permissives.

With one or more channels inoperable, the affected containment spray and containment air return systems components must be declared inoperable immediately. The supported system LCOs provide the appropriate Required Actions and Completion Times for the equipment made inoperable by the inoperable channel. The immediate Completion Time is appropriate since the inoperable channel could prevent the supported equipment from starting when required. Additionally, protection from an inadvertent actuation may not be provided if the terminate function is not OPERABLE.

Q.1, Q.2.1, and Q.2.2

With one channel of NSWS Suction Transfer - Low Pit Level inoperable in one or more NSWS pits, 4 hours are allowed to restore the channel to OPERABLE status or to place it in the tripped condition. The failure of one channel places the Function in a two-out-of-two configuration. The failed channel must be tripped to place the Function in a one-out-of-two configuration that satisfies redundancy requirements.

Failure to restore the inoperable channel to OPERABLE status or place it in the tripped condition within 4 hours requires the unit be placed in MODE 3 within the following 6 hours and MODE 5 within the next 30 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. In MODE 5, this Function is no longer required OPERABLE.

R.1, R.2.1, and R.2.2

With two channels of NSWS Suction Transfer - Low Pit Level inoperable in one or more pits, one channel must be restored to OPERABLE status or the NSWS must be aligned to the Standby NSWS Pond within 4 hours. Failure to restore one channel or to accomplish the realignment within 4 hours requires the unit be placed in MODE 3 within the following 6 hours and MODE 5 within the next 30 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. In MODE 5, this Function is no longer required OPERABLE.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.8.1	Operate each HSS train for ≥ 15 minutes.	92 days
SR 3.6.8.2	Verify the fan motor current is ≤ 69 amps when the fan speed is ≥ 3560 rpm and ≤ 3600 rpm with the hydrogen skimmer fan operating and the motor operated suction valve closed.	92 days
SR 3.6.8.3	Verify the motor operated suction valve opens automatically and the fans receive a start permissive signal.	92 days
SR 3.6.8.4	Verify each HSS train starts on an actual or simulated actuation signal after a delay of ≥ 8 minutes and ≤ 10 minutes.	92 days

BASES

ACTIONS (continued)

must be brought to at least MODE 3 within 6 hours. The allowed Completion Time of 6 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.8.1

Operating each HSS train for ≥ 15 minutes ensures that each train is OPERABLE and that all associated controls are functioning properly. It also ensures that blockage, fan and/or motor failure, or excessive vibration can be detected for corrective action. The 92 day Frequency is consistent with Inservice Testing Program Surveillance Frequencies, operating experience, the known reliability of the fan motors and controls, and the two train redundancy available.

SR 3.6.8.2

Verifying HSS fan motor current at rated speed with the motor operated suction valves closed is indicative of overall fan motor performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The Frequency of 92 days was based on operating experience which has shown this Frequency to be acceptable.

SR 3.6.8.3

This SR verifies the motor operated suction valves open upon receipt of a Containment Pressure – High High signal and associated time delay and that the HSS fans receive a start permissive when the valves start to open. The Frequency of 92 days was based on operating experience which has shown this Frequency to be acceptable.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

SR 3.6.8.3 (12) Verifying that the motor-operated valve in the hydrogen skimmer suction line opens automatically and the hydrogen skimmer fans receive a start permissive signal ~~and~~ ~~from the Containment Pressure Control System~~ ~~start upon receipt of a~~

STET

(A.22)

c. Verifying that with the fan off, the air return fan check damper is closed.

~~4.6.5.6.2~~ At least once per 18 months, each Containment Air Return ~~and Hydrogen Skimmer System~~ shall be demonstrated OPERABLE by:

(A.1)

See markup for ITS 3.6.11

a. Verifying that each air return fan is deenergized or is prevented from starting by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid, relative to the outside atmosphere; and

b. Verifying that each air return fan isolation damper closes or is prevented from opening by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid and is allowed to open at greater than or equal to 0.45 psid, relative to the outside atmosphere.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

SR 3.6.8.3 f. Verifying that the motor-operated valve in the hydrogen skimmer suction line opens automatically and the hydrogen skimmer fans start upon receipt of a receive a start permissive signal; and from the Containment Pressure Control System

STET

A22

g. Verifying that with the fan off, the air return fan check damper is closed.

(See markup for ITS 3.6.11)

~~4.6.8.2~~ At least once per 18 months, each Containment Air Return and Hydrogen Skimmer System shall be demonstrated OPERABLE by:

A1

a. Verifying that each air return fan is deenergized or is prevented from starting by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid, relative to the outside atmosphere; and

b. Verifying that each air return fan isolation damper closes or is prevented from opening by the Containment Pressure Control System when the containment internal pressure is less than or equal to 0.25 psid and is allowed to open at greater than or equal to 0.45 psid, relative to the outside atmosphere.

ADMINISTRATIVE CHANGES

technical requirements. This change is considered administrative and is consistent with NUREG-1431.

A.20 Not used.

A.21 Not used.

A.22 The setpoints for the Containment Pressure Control System (CPCS) specified in CTS 4.6.2.c.3, 4.6.2.c.4, 4.6.2.c.5, 4.6.5.6.2.a, and 4.6.5.2.b are deleted~~. CTS 4.6.5.6.1.f refers to a required start permissive signal for hydrogen skimmers but does not state the source.~~ ITS 3.6.6~~, 3.6.8,~~ and 3.6.11 surveillance requirements refer to the start permissive and terminate signals of the CPCS. The setpoints are already specified in CTS 3.3.2 and retained in ITS 3.3.2. This change does not alter any surveillance requirements and is therefore considered an administrative change.

A.23 Not used.

A.24 CTS LCO 3.6.1.8 Action b allows the ventilation system heaters to be inoperable up to 7 days and allows continued operation of the system provided a report is made to the NRC within 30 days. The report is required to state the reason for the inoperability and the planned actions to return the heaters to operable status. This allowance is reformatted and retained as ITS 3.6.10 Action B. This Action specifies that with the heaters inoperable, the heaters must be restored to operable status within 7 days or action initiated in accordance with ITS 5.6.6. ITS 5.6.6 requires the submittal of a written report containing the reason for the inoperability of the heaters and the planned corrective actions. No technical changes are made and this change is considered administrative.

SR 3.6.8.2	Verify the fan motor current is ≤ 69 amps when the fan speed is ≥ 3560 rpm and ≤ 3600 rpm with the hydrogen skimmer fan operating and the motor operated suction valve closed.	92 days
SR 3.6.8.3	Verify the motor operated suction valve opens automatically and the fans receive a start permissive signal.	92 days

INSERT 5

SR 3.6.8.2

Verifying HSS fan motor current at rated speed with the motor operated suction valves closed is indicative of overall fan motor performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The Frequency of 92 days was based on operating experience which has shown this Frequency to be acceptable.

SR 3.6.8.3

This SR verifies the motor operated suction valves open upon receipt of a Containment Pressure - High High signal and associated time delay and that the HSS fans receive a start permissive when the valves start to open. The Frequency of 92 days was based on operating experience which has shown this Frequency to be acceptable.

Specification 3.1.8

SPECIAL TEST EXCEPTIONS

3/4.10.5 POSITION INDICATION SYSTEM - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.10.5 The limitations of Specification 3.1.3.3 may be suspended during the performance of individual full-length shutdown and control rod drop time measurements provided;

a. Only one shutdown or control bank is withdrawn from the fully inserted position at a time, and

b. The rod position indicator is OPERABLE during the withdrawal of the rods.*

APPLICABILITY: MODES 3, 4, and 5 during performance of rod drop time measurements.

ACTION:

With the Position Indication System inoperable or with more than one bank of rods withdrawn, immediately open the Reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.5 The above required Position Indication Systems shall be determined to be OPERABLE within 24 hours prior to the start of and at least once per 24 hours thereafter during rod drop time measurements by verifying the Demand Position Indication System and the Digital Rod Position Indication System agree:

a. Within 12 steps when the rods are stationary, and

b. Within 24 steps during rod motion.

*This requirement is not applicable during the initial calibration of the Position Indication System provided: (1) K_{eff} is maintained less than or equal to 0.95, and (2) only one shutdown or control rod bank is withdrawn from the fully inserted position at one time.

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SPECIFICATION 3.1.8

R.7

SPECIAL TEST EXCEPTIONS

3/4.10.5 POSITION INDICATION SYSTEM - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.10.5 The limitations of Specification 3.1.3.3 may be suspended during the performance of individual full-length shutdown and control rod drop time measurements provided;

a. Only one shutdown or control bank is withdrawn from the fully inserted position at a time, and

b. The rod position indicator is OPERABLE during the withdrawal of the rods.*

APPLICABILITY: MODES 3, 4, and 5 during performance of rod drop time measurements.

ACTION:

With the Position Indication System inoperable or with more than one bank of rods withdrawn, immediately open the Reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.5 The above required Position Indication Systems shall be determined to be OPERABLE within 24 hours prior to the start of and at least once per 24 hours thereafter during rod drop time measurements by verifying the Demand Position Indication System and the Digital Rod Position Indication System agree:

a. Within 12 steps when the rods are stationary, and

b. Within 24 steps during rod motion.

*This requirement is not applicable during the initial calibration of the Position Indication System provided: (1) K_{eff} is maintained less than or equal to 0.95, and (2) only one shutdown or control rod bank is withdrawn from the fully inserted position at one time.

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and retained in ITS 3.1.5 Action A.2 as 2 hours. The requirement to shutdown to MODE 3 is retained as ITS 3.1.5 Action B. The changes are considered administrative and are consistent with NUREG-1431.

A.22 Not used.

A.23 Specific requirements for the control bank sequence and overlap limits have been added to CTS 3.1.3.6 and 4.1.1.1.1.b on control bank insertion limits. ITS 3.1.6 clearly identifies that these parameters are required to be met by including specific actions and surveillance requirements. These parameters have always been a part of the control bank insertion limit as detailed by the figure in the COLR. No technical requirements are modified and the change is considered administrative in nature since it clarifies information already contained within the existing requirements. The change is consistent with NUREG-1431.

A.24 CTS 3.10.3 allows exceptions to rod alignment and insertion limits during PHYSICS TESTING in MODE 2. With the deletion of CTS 3.1.1.1 SDM is MODE 1 and 2 (see Doc A.2), it is necessary to add appropriate requirements, actions, and surveillances to the test exception LCO. These requirements are retained as ITS LCO 3.1.8. The change is administrative in nature, and no technical change is made. This change is consistent with NUREG-1431.

A.25 CTS 3.10.3.b requires the reactor trip setpoints of the intermediate and power range channels to be set at 25% during performance of PHYSICS TESTS. This information is redundant to the LCO 3.3.1, "RTS Instrumentation" which requires that the trip setpoints for the channels be set to 25% for the intermediate and power ranges in MODE 2. The deletion of redundant requirements is administrative and does not represent a technical change. This change is consistent with NUREG-1431.

A.26 The exceptions to SDM provided by CTS 3.10.1, the exceptions for rod insertion and power distribution limits provided by CTS 3.10.2~~, and the exceptions for rod position indication provided by CTS 3.10.5~~ are no longer needed and are deleted. SDM will be maintained within the limits specified in the COLR during PHYSICS TESTS. PHYSICS TESTS will be conducted in MODE 2, thus the MODE 1 exception provided by CTS 3.10.2 is not needed. ~~Rod position~~

ADMINISTRATIVE CHANGES

~~exception is no longer needed in MODES 3, 4, or 5 and in MODE 2 with K_{eff} < 1.0.~~ The ITS 3.1.8 test exceptions for PHYSICS TESTS in MODE 2 provides an exception to rod alignment requirements. This change is consistent with NUREG-1431.

A.27 CTS 3.10.3.a allows exceptions to certain LCOs for the performance of physics tests provided power is limited to ≤ 5% of Rated Thermal Power (RTP). This statement is redundant because the Applicability for this LCO is MODE 2 (≤ 5% RTP). ITS LCO 3.1.8 retains this same applicability during PHYSICS TESTS. With this deletion, no technical requirements are modified and the change is considered to be administrative in nature. This change is consistent with NUREG-1431.

A.28 CTS 4.1.1.1.1.a and 4.1.1.2.a require verifying SDM when an inoperable (immovable or untrippable) control rod is discovered. This requirement is already contained in CTS 3.1.3.1 and is retained in ITS LCO 3.1.4 for an untrippable control rod. These requirements already provide adequate assurance that SDM is verified and therefore, the requirements of 4.1.1.1.1.a and 4.1.1.2.a are redundant and eliminated. No technical requirements are deleted by the elimination of this redundant requirement and the change is considered administrative. This change is consistent with NUREG-1431.

A.29 CTS 3.1.3.1 Action c.2 and c.3 contain the phrase, "The rod is declared inoperable" when a rod is not within alignment limits. This wording does not add any clarity to the actions and is eliminated. The format in the ITS is such that actions are only entered when the LCO is not met, i.e. the component is inoperable. Therefore, the additional wording is not necessary for inclusion within ITS 3.1.4. No technical requirements are deleted by the elimination of this wording and the change is considered administrative. This change is consistent with NUREG-1431.

A.30 CTS 3.1.3.6 requires that an out of limit control bank be restored within 2 hours or that power be reduced to match the power limit for the existing insertion position. ITS 3.1.6 only requires that the insertion limit be restored. The existing actions are somewhat redundant. Since there are only two ways to restore compliance (i.e., withdraw the control banks or reduce power to

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is required before the shutdown margin is lost. Operations of the boration subsystem is not assumed to mitigate this event.

The CVCS System is not used for, nor is capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA. The CVCS System is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. The CVCS System is not part of a primary success path in the mitigation of a DBA or transient. As discussed in Section 4.0 (Appendix A, page A-6) and summarized in Table 1 of WCAP-11618, the loss of the CVCS System was found to be a non-significant risk contributor to core damage frequency and offsite releases. Duke Power Company has reviewed this evaluation, considers it applicable to the plant, and concurs with the assessment.

Since the screening criteria have not been satisfied, the Borated Water Sources - Operating LCO and Surveillances may be relocated to the Selected Licensee Commitments Manual (UFSAR Chapter 16).

R.7 CTS 3.1.3.3 specifies requirements for rod position indication in MODES 3, 4, and 5. CTS 3.10.5 provides an exception during testing for rod position indication. Control rod operability is assumed for all transients in which a reactor trip is assumed to occur. However, the ±12 step alignment is not assumed when in MODES 3, 4 or 5, since no reactor power is being generated and the reactor is subcritical. The rod alignment and position indication is only necessary when the reactor is critical, to ensure proper power distribution.

The position indication system is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA). The position indication system is not used to indicate status of, or monitor a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient. The position indication system is not part of a primary success path in the mitigation of a DBA or transient. As discussed in Section 4.0 (Appendix A, page A-12) and summarized in Table 1 of WCAP-11618, the loss of the position indication system was found to be a non-significant risk contributor to core damage frequency

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and offsite releases. Duke Power Company has reviewed this evaluation, considers it applicable to the plant, and concurs with the assessment.

Since the screening criteria have not been satisfied, the Position Indication System - Shutdown LCO 3.1.3.3 and its associated test exception 3.10.5 may be relocated to the Selected Licensee Commitments Manual (UFSAR Chapter 16). Surveillance 4.1.3.3 will be retained in ITS SR 3.1.7.1 for rod position indication in MODES 1 and 2.

RELOCATION

safe reactor operation. This system has been credited in certain beyond design basis loss of function scenarios (e.g., loss of service water or component cooling water) to minimize core damage frequency and offsite releases. This system is subject to the regulations associated with the maintenance rule and fire protection which provide adequate regulatory control over its availability. In view of these controls, this item is proposed for relocation out of Technical Specifications as not meeting the criteria of 10 CFR 50.36. Any changes to this requirement in the UFSAR require a 10 CFR 50.59 evaluation. The 10 CFR 50.59 evaluation ensures that changes to this requirement will not have any adverse impact on the safe operation of the plant. This change is consistent with NUREG-1431.