

# CATEGORY 1

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9806160498      DOC. DATE: 98/06/10      NOTARIZED: NO      DOCKET #  
FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha      05000410  
AUTH. NAME      AUTHOR AFFILIATION  
BOSNIC, D.P.      Niagara Mohawk Power Corp.  
DAHLBERG, K.A.      Niagara Mohawk Power Corp.  
RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 98-013-00: on 980511, ESFA was noted. Caused by personnel error. Reinforcement of mgt expectations re response to unexpected abnormal plant situations & for tagout generation & verification. W/980610 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5  
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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	NRC PDR	1 1	NUDOCS FULL TXT	1 1

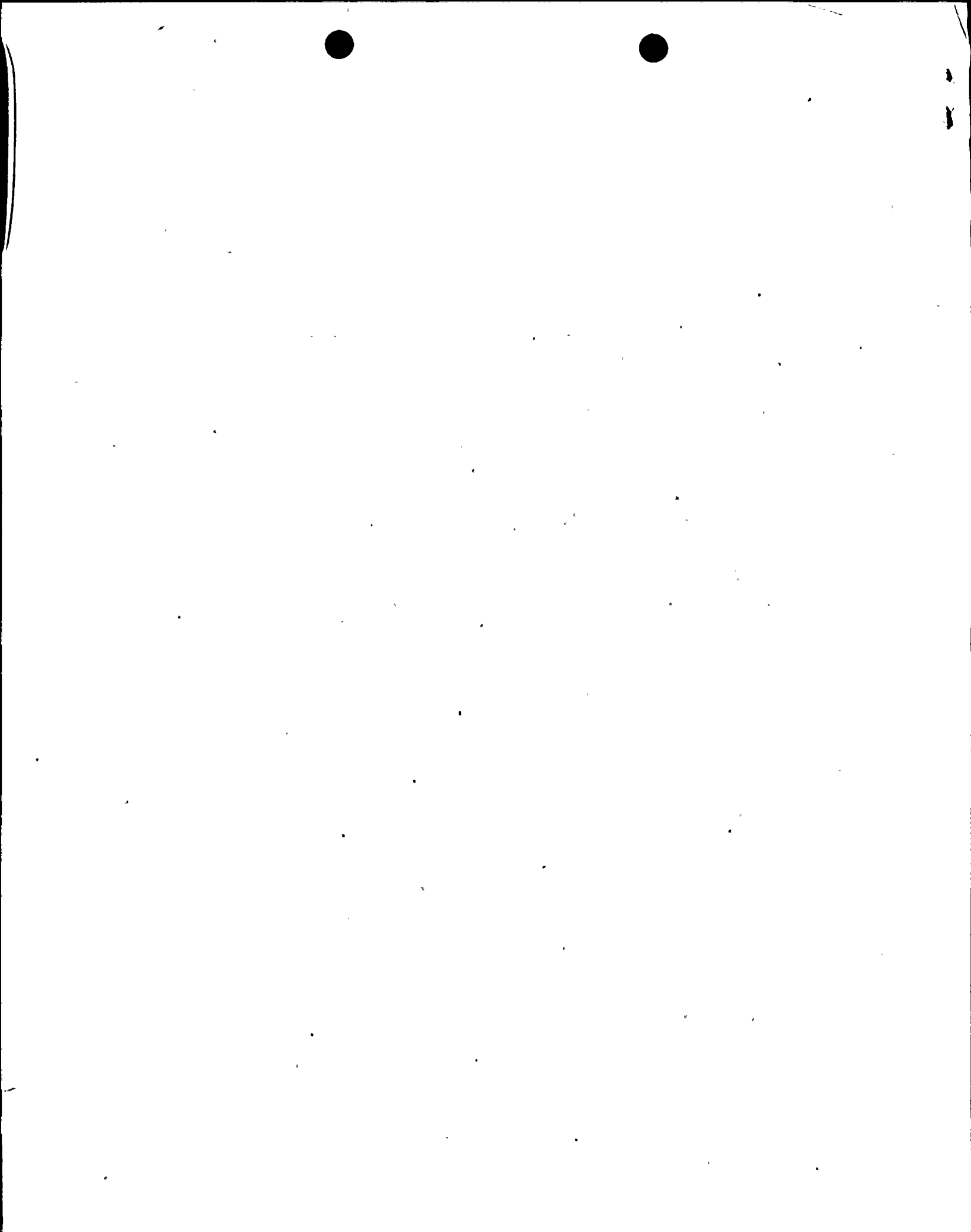
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NIAGARA MOHAWK

GENERATION  
BUSINESS GROUP

NINE MILE POINT NUCLEAR STATION/LAKE ROAD, P.O. BOX 63, LYCOMING, NEW YORK 13093

June 10, 1998  
NMP2L 1789

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: Docket No. 50-410  
LER 98-13

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(iv), we are submitting LER 98-13, "Engineered Safety Feature Actuation Due to Personnel Error".

Very truly yours,

Kim A. Dahlberg  
Plant Manager - Unit 2

KAD/GJG/kap  
Attachment

xc: Mr. H. J. Miller, Regional Administrator, Region I  
Mr. B. S. Norris, Senior Resident Inspector  
Records Management

1/1

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1)

Nine Mile Point Unit 2

DOCKET NUMBER (2)

05000410

PAGE (3)

1 OF 4

TITLE (4)

Engineered Safety Feature Actuation Due to Personnel Error

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)	
05	11	98	98	13	00	06	10	98	N/A	05000	
									N/A	05000	

OPERATING MODE (9)

5

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)

000

- 20.2201(b)
- 20.2203(a)(1)
- 20.2203(a)(2)(i)
- 20.2203(a)(2)(ii)
- 20.2203(a)(2)(iii)
- 20.2203(a)(2)(iv)

- 20.2203(a)(2)(v)
- 20.2203(a)(3)(i)
- 20.2203(a)(3)(ii)
- 20.2203(a)(4)
- 50.36(c)(1)
- 50.36(c)(2)

- 50.73(a)(2)(i)
- 50.73(a)(2)(ii)
- 50.73(a)(2)(iii)
- 50.73(a)(2)(iv)
- 50.73(a)(2)(v)
- 50.73(a)(2)(vi)

- 50.73(a)(2)(viii)
- 50.73(a)(2)(x)
- 73.71
- OTHER  
*(Specify in Abstract below and in Text, NRC Form 366A)*

LICENSEE CONTACT FOR THIS LER (12)

NAME

Don P. Bosnic, Manager Operations - NMP2

TELEPHONE NUMBER

(315) 349-7952

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)

MONTH

DAY

YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On May 11, 1998, while in refueling outage 6, Nine Mile Point Unit 2 (NMP2) experienced the initiation of the Division II Emergency Diesel Generator (EDG) as well as re-alignment of Residual Heat Removal Systems (RHS) B and C to the Low Pressure Coolant Injection (LPCI) mode. These Engineered Safety Feature (ESF) initiations occurred upon reclosing the power supply to multiple Division II trip units.

The root cause of the ESF actuation was that the Station Shift Supervisor (SSS) did not ensure the plant impact was fully evaluated prior to re-energizing the circuit. Contributing to the event was poor work package preparation, and use of an inappropriate document to verify the tagout when 2VBS\*PNL301B Circuit 6 was added to the tagout.

Corrective actions include reinforcement of management expectations regarding response to unexpected abnormal plant situations and for tagout generation and verification.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Nine Mile Point Unit 2	05000410	98	13	00	02 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

**I. DESCRIPTION OF EVENT**

On May 11, 1998, while in refueling outage 6, Nine Mile Point Unit 2 (NMP2) experienced the initiation of the Division II Emergency Diesel Generator (EDG) as well as re-alignment of Residual Heat Removal Systems (RHS) B and C to the Low Pressure Coolant Injection (LPCI) mode. These Engineered Safety Feature (ESF) initiations occurred upon reclosing the power supply to multiple Division II trip units.

On May 11, 1998, valve 2RHS\*LV17B was tagged out of service to be repaired. At the time, the entire 'B' loop of the RHS system was out of service. In order to isolate instrument air from the valve, operators revised the tagout to open 2VBS\*PNL301B Circuit 6. This breaker was not on the original tagout request, since isolation of instrument air had not been considered necessary. The operator reviewed Operating Procedure (OP) N2-OP-31, Residual Heat Removal System, to determine the loads on 2VBS\*PNL301B Circuit 6. The OP lineup listed 2RHS\*LV17B and 2RHS\*PV21B. Based upon that information, the operators writing and reviewing the tagout did not believe that there was any additional plant impact.

When the breaker was opened to place the tag, Control Room personnel noticed abnormal alarms and indications, including closure of RHS "B" and "C" minimum flow valves and loss of the open permissive for the LPCI "B" and "C" injection valves. An investigation was initiated to determine the cause. It was determined that the opened breaker had caused the abnormal indications including the loss of open permissive for 2RHS\*MOV24C, the injection valve for RHS pump "C" (2RHS\*P1C), which was being used as credit for "N+1" considerations (inventory control). A decision was made by the Station Shift Supervisor (SSS) to reclose the breaker and restore the availability to inject with RHS pump "C".

The investigation prior to closing the breaker did not reveal or consider the potential for a downscale initiation from the trip units when the circuit was energized. Because of this, when 2VBS\*PNL301B Circuit 6 was re-energized, the Rx Low Level Trip units were downscale (de-energized response) and a low level trip was then initiated which caused the Division II EDG to start. This actuation is commonly called a "relay race", as the trip circuitry saw a low level before the trip units reset to their normal reading. This would not normally occur during a Loss of Offsite Power (LOOP) as the Division II Uninterruptible Power Supply (UPS) would maintain power continuity. Additionally, the Division II PAM (Post-Accident Monitoring) recorder shifted to fast speed, LPCI "B" and "C" injection valves opened, and gross failure lights were received on several Division II trip units. The LPCI "B" and "C" pumps were in pull-to-lock to prevent injection into a flooded reactor cavity and therefore did not start.

The EDG and other equipment were subsequently returned to standby and the event was terminated.





LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
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Nine Mile Point Unit 2	05000410	98	- 13	- 00	03 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

## II. CAUSE OF EVENT

The root cause of the ESF actuation was that the SSS directed the re-closure of the open breaker before the impact of re-energizing the circuit had been verified. Although the SSS felt no sense of urgency to reclose the breaker, the crew was not sensitive to the impact of energization of all components powered by the breaker.

A contributor to the event was inadequate work package preparation in that the tagout request did not contain adequate protection points as required by procedure. Additionally, the OP lineup was used to verify the plant impact when 2VBS\*PNL301B Circuit 6 was added to the tagout. Use of an OP lineup was inappropriate for this verification.

## III. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73(a)(2)(iv), "any event or condition that resulted in a manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)."

At the time of this event, all systems required by NMP2 Technical Specifications remained operable. RHS 'C' was the defense in depth system credited as the plus "1" system for N+1 in accordance with NMPC outage operating philosophy. When the circuit breaker was opened, the plus "1" system was not available. However, the reactor cavity was full, and therefore, the consequences of RHS "C" having been unavailable for injection were minimal. Upon reclosure of 2VBS\*PNL301B Circuit 6, RHS "C" became available. There was no threat to public health and safety caused by this event.

## IV. CORRECTIVE ACTIONS

- Operators evaluated the plant response and restored the Division II EDG and Division II Emergency Core Cooling Systems (ECCS) to their pre-event status when it was determined that the actuations were not due to a valid ECCS initiation signal.
- As an immediate interim action, operators were instructed to provide an additional verifier for all electrical tagouts involving circuits powered by a source below the motor control center level. This action was in place until the root cause was determined and other corrective actions taken.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 30.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH II (P-530), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20535, AND TO THE PAPERWORK REDUCTION PROJECT  
(3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)
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Nine Mile Point Unit 2	05000410	98	- 13	- 00	04 OF 04

TEXT (If more space is required, use additional NRC Form 366A's) (17)

IV. CORRECTIVE ACTIONS (cont'd)

3. Shortly after the event, expectations were provided to Operations that controlled prints must be used to write and verify the adequacy of tagouts.
4. The Operations Manual has been revised incorporating clear direction on tagout verification, including the guidance from corrective action 3 above.
5. Management expectations will be re-enforced to all operators regarding expected actions when faced with an unexpected abnormal situation. Included in this will be a review of the characteristic of trip unit/circuitry energization and de-energization by June 30, 1998.
6. The Work Control Manager has re-enforced expectations for requesting tagouts with Work Control personnel.

V. ADDITIONAL INFORMATION

- A. Failed components: none.
- B. Previous similar events: LER 93-09, "Engineered Safety Feature Actuations Resulting From a Loss of Power to RPS and PCIS Caused by Personnel Error," describes a reactor scram and ESF actuations caused by inadvertent de-energization of a UPS during refueling. The UPS was de-energized during a planned restoration of offsite power Line 5. The corrective actions focused on proper evaluation of planned plant evolutions and would not have prevented this event from occurring.
- C. Identification of components referred to in this LER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM ID
Engineered Safety Features Actuation System	NA	JE
2RHS*LV17B	LCV	BO
2RHS*PV21B	PCV	BO
2VBS*PNL301B	PL	ED
2RHS*MOV24C	20	BO
2RHS*PIC	P	BO



100-100000