



APPENDIX **A**

Notifications, Fault Management, and Probable Cause Mapping

This appendix includes information on Cisco Prime Optical Gateway/CORBA's notifications, fault management, and probable cause mapping. This appendix includes the following sections:

- [A.1 Overview of Notifications, page A-1](#)
- [A.2 Resolving the Notification Service, page A-2](#)
- [A.3 Tips to Improve Notification Throughput, page A-2](#)
- [A.4 Supported Events, page A-3](#)
- [A.5 Probable Cause Mapping, page A-15](#)

A.1 Overview of Notifications

The notification service forwards all fault notifications received from managed NEs to the network management system (NMS). The notification service also forwards object creation, object deletion, attribute change, protection switch, and threshold crossing alert (TCA) events. TMF 814 defines the structure and format of attributes for all events and alarms.

The Prime Optical server and the Operations Support System (OSS) host must have Domain Name System (DNS) enabled in order to receive notifications. OSS clients running behind a firewall must configure an IIOP listening port to enable the TCP connection with the notification server. Prime Optical must configure the notification service listening port number to allow OSS clients to communicate with the notification service.

Prime Optical creates the notification channel with the QoS parameters shown in the following table.

Table A-1 QoS Parameters for the Notification Channel

| Parameter | Value |
|-----------------------------------|------------|
| ConnectionReliability | BestEffort |
| StartTimeSupported | false |
| OrderPolicy | FifoOrder |
| DiscardPolicy | FifoOrder |
| MaxEventsPerConsumer ¹ | 10000 |

1. The MaxEventsPerConsumer value is configurable. To modify this value, see [B.9 Location of the Naming Service IOR File, page B-6](#). All other parameter values are defined by the TMF and cannot be changed.

Prime Optical sets the RejectNewEvents administration property of the channel to true, as defined by the TMF.

Every notification that Prime Optical generates has the QoS parameters listed in the following table. These parameter values are defined by the TMF and cannot be changed.

Table A-2 QoS Parameters for Notifications

| Parameter | Value |
|------------------|--|
| EventReliability | BestEffort |
| Priority | DefaultPriority |
| Timeout | 30 minutes for alarms and TCAs; 24 hours for all other notifications |

The NMS retrieves all active alarms on the Element Management System (EMS) and on managed element objects. The NMS filters alarms based on probable cause and managed element name. GateWay/CORBA forwards Prime Optical-specific alarms to the NMS.

For NE-related alarms, Prime Optical inserts the original probable cause in the alarm's nativeProbableCause field. The TMF-mapped probable cause is available in the probableCause field.

A.2 Resolving the Notification Service

GateWay/CORBA can integrate with external notification services. When GateWay/CORBA starts, a reference to EventNotifyChannelFactory is resolved. GateWay/CORBA makes the following attempts to resolve the object:

1. Resolve initial references with the default service name of NotificationService to resolve the object. You can change the service name by setting the corbagw.notification.ServiceName property in the corbagw.properties file.
2. Resolve the object through the naming service. The default naming service entry is services.NotifyChannelFactory. You can change the naming service entry by setting the corbagw.notification.NamingContext property in the corbagw.properties file.
3. Resolve the object directly through the Interoperable Object Reference (IOR). You can change the URL of the IOR file by setting the corbagw.notification.FactoryIORFile property in the corbagw.properties file. The default location for the IOR file is file://localhost/CTM_baseDir/cfg/NotificationService.ior. You can specify a URL that points to a remote web server.

A.3 Tips to Improve Notification Throughput

While GateWay/CORBA and the bundled notification server are developed and tuned to provide high throughput, you might want to take additional steps to improve throughput and avoid any loss of notifications. You should implement the StructuredPushConsumer interface defined by the Object Management Group (OMG) and implement the push_structured_event method. The notification server invokes this method on the NMS.

**Caution**

Because all CORBA calls are blocking, the notification server thread blocks until the `push_structured_event` method completes. If you try to perform a time-consuming task before the method completes, you will block the notification server.

To improve throughput, you should receive the event and forward it to another thread for processing.

For example:

```
void push_structured_event(StructuredEvent notification) {
    try {
        some_other_thread_queue.addNotification(notification);
    } catch (Exception ex) {
        // catch all exception and ignore
        ex.printStackTrace();
    }
}
```

**Caution**

As shown in the example, you must catch all exceptions, or you will stop receiving notifications.

A.4 Supported Events

The following sections list the attributes of each event.

A.4.1 Object Creation

The following table lists the object creation types and attributes.

Table A-3 Object Creation

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------------------------------|---|
| notificatId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | No. |
| edgePoint | boolean | No. |

Object creation notifications are sent to the NMS for the objects in the following table.

Table A-4 Object Creation Notifications

| Object Type | Type Sent in remainder_of_body for Object Creation Event |
|--------------------------|--|
| OT_MANAGED_ELEMENT | managedElement::ManagedElement_T |
| OT_MULTILAYER_SUBNETWORK | multiLayerSubnetwork::MultiLayerSubnetwork_T |

Table A-4 Object Creation Notifications (continued)

| Object Type | Type Sent in remainder_of_body for Object Creation Event |
|--------------------------|--|
| OT_TOPOLOGICAL_LINK | topologicalLink::TopologicalLink_T |
| OT_SUBNETWORK_CONNECTION | subnetworkConnection::SubnetworkConnection_T |
| OT_EQUIPMENT | equipment::Equipment_T |
| OT_PROTECTION_GROUP | protection::ProtectionGroup_T |
| OT_L2TOPOLOGY | MultiLayerSubnetwork::L2Topology_T |
| OT_MLVLAN | MultiLayerSubnetwork::MLVLAN_T |
| OT_ROLL | MultiLayerSubnetwork::Roll_T |
| OT_VCAT | SubnetworkConnection::VCAT_T |

Prime Optical does not generate object creation events for SubnetworkConnection for the ONS 15540. Prime Optical cannot give the object name for object creation events for ONS 15530 and ONS 15540 equipment.

**Note**

The number of equipment holders for NEs supported by Prime Optical is constant. To reduce traffic between Prime Optical and the NMS, Prime Optical does not generate object creation events for equipment holders. The number of PTPs on equipment is also constant. Therefore, Prime Optical generates only object creation events for equipment.

A.4.2 Object Deletion

The following table lists the object deletion types and attributes.

Table A-5 Object Deletion

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------------------------------|---|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | No. |
| edgePoint | boolean | No. |

Object deletion notifications are sent to the NMS for the objects in the following table.

Table A-6 Object Deletion Notifications

| Object Type | Type Sent in remainder_of_body for Object Deletion Event |
|--------------------------|--|
| OT_MANAGED_ELEMENT | managedElement::ManagedElement_T |
| OT_MULTILAYER_SUBNETWORK | multiLayerSubnetwork::MultiLayerSubnetwork_T |

Table A-6 Object Deletion Notifications (continued)

| Object Type | Type Sent in remainder_of_body for Object Deletion Event |
|--------------------------|--|
| OT_TOPOLOGICAL_LINK | topologicalLink::TopologicalLink_T |
| OT_SUBNETWORK_CONNECTION | subnetworkConnection::SubnetworkConnection_T |
| OT_EQUIPMENT | equipment::Equipment_T |
| OT_PROTECTION_GROUP | protection::ProtectionGroup_T |
| OT_L2TOPOLOGY | MultiLayerSubnetwork::L2Topology_T |
| OT_MLVLAN | MultiLayerSubnetwork::MLVLAN_T |
| OT_ROLL | MultiLayerSubnetwork::Roll_T |
| OT_VCAT | SubnetworkConnection::VCAT_T |

Prime Optical does not generate object deletion events for SubnetworkConnection for the ONS 15530 and ONS 15540.

**Note**

The number of equipment holders for all NEs supported by Prime Optical is constant. To reduce traffic between Prime Optical and the NMS, Prime Optical does not generate object deletion events for equipment holders. The number of PTPs on equipment is also constant. Therefore, Prime Optical generates only object deletion events for equipment.

A.4.3 Attribute Value Change

The following table lists the attribute value change (AVC) types and attributes.

Table A-7 Attribute Value Change

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------------------------------|---|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | No. |
| edgePoint | boolean | No. |
| attributeList | notifications::NVList_T | Yes. |

A.4.3 Attribute Value Change

Attribute value change notifications are sent to the NMS for the objects and attributes listed in the following table.

Table A-8 *Attribute Value Change Notifications*

| Object Type | Attributes |
|---------------------------------------|---|
| OT_EMS | nativeEMSName |
| OT_MANAGED_ELEMENT | nativeEMSName—This field reflects the new managed element name if it is changed. <ul style="list-style-type: none"> location version productName |
| OT_MULTILAYER_SUBNETWORK | NativeEMSName |
| OT_TOPOLOGICAL_LINK ¹ | None |
| OT_SUBNETWORK_CONNECTION ² | None |
| OT_L2TOPOLOGY | NativeEMSName |
| OT_MLVLAN | None Note This event notifies the NMS that the VLAN was updated. |
| OT_ROLL | None Note This event notifies the NMS that the roll was updated. |
| OT_VCAT | None Note This event notifies the NMS that the VCAT changed. |
| OT_PHYSICAL_TERMINATION_POINT | Operation applied to PPM port rate. |

1. The OT_TOPOLOGICAL_LINK event notifies the NMS that some attribute of the topological link has changed.
2. The OT_SUBNETWORK_CONNECTION event is generated only when Prime Optical fails to delete an SNC and it remains in the same state.



Note

Prime Optical does not generate AVC events for SubnetworkConnection for ONS 15530 and ONS 15540.

A.4.3.1 Alarm Acknowledge/Unacknowledge—Attribute Value Change

The alarm acknowledge/unacknowledge API generates an attribute value change that reports the fields changed for a given alarm. The following table displays the attribute list reported.

| Attribute Name | Type | Description |
|----------------------|--------|-------------------|
| Ack | Yes/No | — |
| Ack Time Stamp (GMT) | — | yyyymmddhhmmss.0Z |
| Ack Username | String | OSS user |

Example

Fixed Header Domain = tmf_mtnm

```

Variable Header      Type                = NT_ATTRIBUTE_VALUE_CHANGE
                    Event Reliability = 0
                    Priority          = 0
                    Timeout           = 864000000000

Filterable Data     [0] notificationId = AVC-31
                    [1] objectName    = [0] EMS=Cisco Systems/PrimeOptical; [1]
ManagedElement=15454-ANSI-68-7; [2] AID=notificationId=10
                    [2] objectType   = OT_AID
                    [3] objectTypeQualifier =
                    [4] emsTime      = 20111201143219.OZ
                    [5] neTime       = 20030714115221.OZ
                    [6] edgePoint    = false
                    [7] attributeList = [0]Ack=Yes [1]Ack Time Stamp
(GMT)=20111201143219.OZ [2]Ack Username=SuperUser
                    [8] isPropagated = false

Remainder of body:

```

A.4.3.2 Alarm Note Change—AttributeValueChange

The setAdditional attribute for the alarm note API generates an attribute value change that reports the fields changed for a given alarm. The following table lists the attributes reported.

| Attribute Name | Type | Description |
|----------------|---|------------------------|
| Note | <ul style="list-style-type: none"> • Append • Delete • Replace | The type of operation. |
| Value | String | The note. |

Example:

```

Fixed Header      Domain                = tmf_mtnm
                  Type                = NT_ATTRIBUTE_VALUE_CHANGE

Variable Header   Event Reliability = 0
                  Priority            = 0
                  Timeout             = 864000000000

Filterable Data  [0] notificationId = AVC-26
                  [1] objectName    = [0] EMS=Cisco Systems/PrimeOptical; [1]
ManagedElement=15454-ANSI-68-7; [2] AID=notificationId=3
                  [2] objectType   = OT_AID
                  [3] objectTypeQualifier =
                  [4] emsTime      = NA
                  [5] neTime       = 20030714115207.OZ
                  [6] edgePoint    = false
                  [7] attributeList = [0]Note=append OSS
(User Name: CorbaUser  Timestamp: 12/13/11 11:27:24 AM GMT)

                  [8] isPropagated = false

Remainder of body:

```

A.4.3.3 OCHCC GMPLS SNCs Validate—AttributeValueChange

The validation of a manual or automatic OCHCC GMPLS SNC triggers an attribute value change event. This event is represented by the following parameters:

- gmplsAcptThreshold
- gmplsOptValid

The following table lists the attributes that are reported.

| Attribute Name | Type | Description |
|--------------------|--------|---|
| gmplsAcptThreshold | String | This threshold acceptance value is checked against the actual optical value. It can assume one of the following values: <ul style="list-style-type: none"> • Green • Yellow • Orange • Red • NotApplicable |
| gmplsOptValid | String | Current optical valid value. It can assume one of the following values: <ul style="list-style-type: none"> • Green • Yellow • Orange • Red • NotApplicable |

Example

```

Fixed Header          Domain          = tmf_mtnm
                     Type            = NT_ATTRIBUTE_VALUE_CHANGE
Variable Header      Event Reliability = 0
                     Priority         = 0
                     Timeout         = 864000000000

Filterable Data      [0] notificationId = AVC-20
                     [1] objectName  = [0] EMS=Cisco Systems/PrimeOptical; [1]
SubnetworkConnection=ochXXGmplsCircuit
                     [2] objectType  = OT_SUBNETWORK_CONNECTION
                     [3] objectTypeQualifier =
                     [4] emsTime     = 20120208223834.0Z
                     [5] neTime     =
                     [6] edgePoint   = false
                     [7] attributeList = [0]gmplsAcptThreshold=Orange
[1]gmplsOptValid=Green
                     [8] isPropagated = false
Remainder of body:

```


A.4.3.4 OCHCC GMPLS SNCs Creation Failure—AttributeValueChange

Creating an OCHCC GMPLS SNC requires a background request validation. The API performs a first parsing level of passed information. A successful response does not mean that the SNC has been created. The SNC is created only after a successful network validation.

Notification of OCHCC GMPLS SNC creation occurs through an attribute value change event. If the API executes successfully but the network validation fails for any reason, a new notification of an attribute value change event is sent. The notification contains the SNC name and the reason for the failure.

For OCHCC, OCHNC, and OCH trail circuits, you can provide additional GMPLS information about the associated SNCs.

The following table lists the reported attributes.

| Attribute Name | Type | Description |
|-----------------|--------|--|
| Creation Result | String | Creation result. For example, circuit creation failed. |
| Error Reason | String | Describes the reason for the failure. |

Example

```

Fixed Header          Domain          = tmf_mtrm
                     Type            = NT_ATTRIBUTE_VALUE_CHANGE
Variable Header      Event Reliability = 0
                     Priority         = 0
                     Timeout         = 86400000000

Filterable Data      [0] notificationId   = AVC-21
                     [1] objectName    = [0] EMS=Cisco Systems/PrimeOptical; [1]
SubnetworkConnection=ochnc-unprot-gmpls
                     [2] objectType    = OT_SUBNETWORK_CONNECTION
                     [3] objectTypeQualifier =
                     [4] emsTime       = 20120208223853.0Z
                     [5] neTime        =
                     [6] edgePoint      = false
                     [7] attributeList = [0]Creation Result=Circuit Creation Failed
[1]Error Reason=Operation Failed node: 10.58.65.104 No Trunk port matching the request
                     [8] isPropagated  = false
Remainder of body:

```

A.4.4 State Change Event

The following table lists the state change event types and attributes.

Table A-9 State Change Event

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------------------------------|---|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | No. |

Table A-9 State Change Event (continued)

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|-------------------------|-----------------------------|
| edgePoint | boolean | No. |
| attributeList | notifications::NVList_T | Yes. |

State change event notifications are sent to the NMS for the objects and attributes in the following table.

Table A-10 State Change Event Notifications

| Object Type | Attributes |
|---------------------------------------|--|
| OT_MANAGED_ELEMENT | <p>communicationState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> CS_AVAILABLE CS_UNAVAILABLE <p>emsInSyncState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> True False |
| OT_EQUIPMENT HOLDER | <p>holderState—State change. Prime Optical supports the following values:</p> <ul style="list-style-type: none"> EMPTY INSTALLED_AND_EXPECTED EXPECTED_AND_NOT_INSTALLED MISMATCH_OF_INSTALLED_AND_EXPECTED |
| OT_SUBNETWORK_CONNECTION ¹ | <p>sncState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> SNCS_DELETING SNCS_PARTIAL SNCS_ACTIVE |
| OT_L2TOPOLOGY | <p>L2TopoState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> L2TS_COMPLETE L2TS_INCOMPLETE <p>topoInSyncState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> true false |
| OT_MLVLAN | <p>vlanState—Prime Optical supports the following values:</p> <ul style="list-style-type: none"> VLS_COMPLETE VLS_INCOMPLETE |

Table A-10 State Change Event Notifications (continued)

| Object Type | Attributes |
|-------------|--|
| OT_ROLL | rollState—Prime Optical supports the following values: <ul style="list-style-type: none"> ROLL_PENDING ROLL_COMPLETED ROLL_CANCELLED ROLL_INCOMPLETE |
| OT_VCAT | vcatsState—Prime Optical supports the following values: <ul style="list-style-type: none"> VCATS_DELETING VCATS_PARTIAL VCAT_ACTIVE |

- The OT_SUBNETWORK_CONNECTION event is generated only when Prime Optical changes the SNC. If CTC or any other tool is used to change the SNC, Prime Optical does not report this event.

Prime Optical does not generate state change events for EquipmentHolder and SubnetworkConnection for the ONS 15530 and ONS 15540.

A.4.5 Protection Switch

The following table lists the protection switch types and attributes.

Table A-11 Protection Switch

| Attribute Name | Type | Supported by Prime Optical? |
|------------------|-------------------------------------|---|
| notificationId | String | Yes. The uniqueness and the sequence of the notification ID are not guaranteed. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | No. |
| ProtectionType | protection::ProtectionType_T | No. |
| switchReason | protection::switchReason_T | No. |
| layerRate | transmissionParameters::LayerRate_T | No. |
| groupName | globaldefs::NamingAttributes_T | No. (Yes for ONS 15540 and ONS 15530.) |
| protectedTP | globaldefs::NamingAttributes_T | No. (Yes for ONS 15540 and ONS 15530.) |
| switchAwayFromTP | globaldefs::NamingAttributes_T | Yes for ONS 15540 and ONS 15530. |
| switchToTP | globaldefs::NamingAttributes_T | No. (Yes for ONS 15540 and ONS 15530.) |

Table A-11 Protection Switch (continued)

| Attribute Name | Type | Supported by Prime Optical? |
|--|--------------------------------|---|
| affectedTP Note This is not defined by the TMF. | globaldefs::NamingAttributes_T | Yes. (No for ONS 15540 and ONS 15530.) |
| Description Note This is not defined by the TMF. | String | Yes. The value of this field is the native NE event value. |

A.4.6 Threshold Crossing Alert

The following table lists the TCA types and attributes. This event is not supported for ONS 15530 or ONS 15540 NEs because TCAs are reported as alarms.

Table A-12 Threshold Crossing Alert

| Attribute Name | Type | Supported by Prime Optical? |
|-------------------|-------------------------------------|--|
| notificationId | string | Yes. The uniqueness and the sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| nativeEMSName | string | Yes. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | Yes. |
| isClearable | boolean | Yes. Always set to false. |
| perceivedSeverity | notifications::PerceivedSeverity_T | Yes. Always set to PerceivedSeverity_T.PS_INDETERMINATE. |
| layerRate | transmissionParameters::LayerRate_T | Yes. |
| granularity | Granularity_T | Yes. |
| pmParameterName | PMPParameterName_T | Yes. Note If the NE does not report the location, this field is empty. |
| pmLocation | PMLocation_T | Yes. Note If the NE does not report the location, this field is empty. |
| thresholdType | PMThresholdType_T | No. |
| value | float | Yes. |
| unit | string | No. |

A.4.7 Alarm

The following table lists the most common alarm messages.

If there is an alarm on an STS/VC4 CTP utilizing all ports of a DS1/E1 card, the alarm is reported with the containing PTP as port 127. If an STS/VC4 SNC exists with one of the drop CTPs of the SNC using all ports on a DS1/E1 card, and if there is an alarm on the STS CTP, Prime Optical reports the port number of the containing PTP as 127.

Table A-13 Alarm

| Attribute Name | Type | Supported by Prime Optical? |
|------------------------|-------------------------------------|---|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| objectName | globaldefs::NamingAttributes_T | Yes. |
| nativeEMSName | string | Yes. |
| nativeProbableCause | string | Yes. Note In case of external condition alarms, the string value of the condition type is appended to this field. |
| objectType | notifications::ObjectType_T | Yes. |
| emsTime | globaldefs::Time_T | Yes. |
| neTime | globaldefs::Time_T | Yes. |
| isClearable | boolean | Yes. The value is always set to True. |
| layerRate | transmissionParameters::LayerRate_T | Yes. Note Not supported for ONS 15530 and ONS 15540 NEs. |
| probableCause | string | Yes. |
| probableCauseQualifier | string | Yes. Prime Optical provides the same value as in the nativeProbableCause field. |
| perceivedSeverity | notifications::PerceivedSeverity_T | Yes. |
| serviceAffecting | notifications::ServiceAffecting_T | Yes. |
| affectedTPLList | globaldefs::NamingAttributesList_T | Yes. |
| additionalText | string | Yes. |

Table A-13 Alarm (continued)

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|-----------------------|--|
| additionalInfo | globaldefs::NVSLIST_T | Yes. Prime Optical provides subnetwork name when available. If the alarmed object is OC-n PTP, Prime Optical also includes SDH_SONET_SS_BITS in this list. Prime Optical provides the IP address for ME-related alarms. Prime Optical provides the ME name when the object type is OT_EMS and the alarm is ME-related. Prime Optical provides the affected object when the object type is OT_EMS and the nativeProbableCause is "Server Monitor Threshold Crossed." |
| isPropagated | boolean | Yes, but this field is always set to False. |
| aresFDN | string | Yes. |

A.4.8 Heartbeat Event

Prime Optical generates a periodic heartbeat event and pushes the event to the notification channel. By default, this function is disabled. You can configure the interval value through the Prime Optical Control Panel. If the interval value is set to 0, the heartbeat event is disabled. By monitoring this event, the northbound interface client knows whether the notification service is active. The `type_name` field contains the `NT_HEART_BEAT` value under the `fixed_header` for this type of event. `Filterable_data` has only one field, which is shown in the following table.

Table A-14 Heartbeat Event

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------|---|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |

A.4.9 Backup Status Event

The backup status event contains details about changes to a managed element's backup status.

Table A-15 Backup Status Event

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|--------------------|--|
| notificationId | string | Yes. The uniqueness and sequence of the notification ID are not guaranteed. |
| emsTime | globaldefs::Time_T | Yes. The time when the EMS reported the event. |
| neTime | globaldefs::Time_T | Yes. The time provided by the NE. If the NE does not report time, this field is optional or reports an empty string. |

Table A-15 Backup Status Event (continued)

| Attribute Name | Type | Supported by Prime Optical? |
|----------------|---------------------------------|---|
| backupStatus | softwareManager::BackupStatus_T | Yes. The backup status of the managed element. |
| meName | globaldefs::NamingAttributes_T | Yes. The name of the managed element from which the backup was taken. |

A.5 Probable Cause Mapping

A.5.1 TMF-Defined Probable Cause

The following report lists the probable causes defined by the TMF:

```
"UNIDENTIFIED": for alarms that do not match any other string below. EMS shall in this
case fill out the additional text field as much as possible.
"AIS": alarm indication signal
"AMS": Alternate modulation signal
"AU-AIS": AU alarm indication signal
"BER_SD": signal degrade (includes receiver degrade)
"BER_SF": signal fail (includes receiver failure and excessive BER)
"DCC_FAILURE": Data Communication Channel Failure
"EMS": EMS system alarm
"EMS_ALM_LOSS": The 1st notification that the EMS may supply after 1 or more notifications
for protection switch, TCA, alarm, or file transfer status have been discarded by the EMS
while other events have not been discarded
"EMS_LIFECYCLE_LOSS": The 1st notification that an EMS may supply after 1 or more events
of type OC/OD/AVC/SC/RC have been discarded by the EMS
"EMS_ALM_AND_LIFECYCLE_LOSS": The 1st notification that an EMS may supply after 1 or more
notifications for protection switch, TCA, alarm, or file transfer status, and 1 or more
events of type OC/OD/AVC/SC/RC have been discarded by the EMS
"EQPT": equipment alarm
"ENV" Environmental/external cause
"FOP_APS": failure of APS protocol
"LCD": Loss of Cell Delineation (from TC Adaptor part of ATM NI)
"LOF": loss of frame (when distinguished from LOS)
"LOM": loss of multiframe (SDH only, since not an alarm in GR-253)
"LOP": loss of pointer
"LOS": loss of signal
"MS-AIS": MS alarm indication signal
"OSC-AIS": Optical Supervisory Channel alarm indication signal
"OSC_BER_SF": Optical Supervisory Channel signal fail/RX fail/excessive BER
"OSC_FERF": Optical Supervisory Channel Far End Receive Failure
"OSC_LOF": Optical Supervisory Channel Loss of Frame
"OSC_LOS": Optical Supervisory Channel Loss of Signal
"OSC_SD": Optical Supervisory Channel signal degrade
"PLM": payload label mismatch (when reported as an alarm)
"RAI": remote alarm indication (sometimes reported as RDI)
"SECURITY_VIOLATION": security violation
"SSF": server signal fail
"TCM-AIS": Tandem Connection Sink - Incoming Alarm Indication Signal
"TCM-LOS": Tandem Connection Sink - Loss of Tandem Connection Signal
"TCM-OAI": Tandem Connection Sink - Outgoing Defect Indication (same/similar to Alarm
Indication)
"TCM-RAI": Tandem Connection Sink - Remote Defect Indication (same/similar to Alarm
Indication)
"TCM-SD": Tandem Connection Sink - Signal Degrade
"TCM-SSF": Tandem Connection Sink - Server Signal Fail
```

A.5.2 GateWay/CORBA Mapping—EMS

"TCM-TIM": Connection Sink - Trace Identifier Mismatch
 "TCM-UNEQ": Tandem Connection Sink - Unequipped
 "TIM": trace identifier mismatch (when reported as an alarm)
 "TU-AIS": TU alarm indication signal
 "TX_DEGRADE": transmitter degrade, including laser degrade
 "TX_FAIL": transmitter failure, including laser failure
 "UAT": Unavailable Time
 "UNEQ": payload unequipped
 "VC-AIS": VCL/VCC TP Alarm Indication Signal
 "VC-RDI": VCL/VCC TP Remote Defect Indication
 "VP-AIS": VPL/VPC TP Alarm Indication Signal
 "VP-RDI": VPL/VPC TP Remote Defect Indication

A.5.2 GateWay/CORBA Mapping—EMS

The following table lists the GateWay/CORBA mapping for the EMS.

Table A-16 GateWay/CORBA Mapping for the EMS

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| EMS | Loss of communication |
| EMS | Memory automatic or manual backup failure |
| SECURITY_VIOLATION | Maximum login attempts exceeded |
| EMS | Partition 0...6 free disk space low |
| EMS | Alarm resync unsuccessful |
| EMS | Server monitor threshold crossed |

A.5.3 GateWay/CORBA Mapping—ONS 15216

The following table lists the alarms for the ONS 15216 OADM R2.2.

Table A-17 GateWay/CORBA Alarms for the ONS 15216 OADM R2.2

| TMF Mapping | NE Native Probable Cause |
|-------------|--|
| LOS | Add channel signal loss |
| LOS | Drop channel signal loss |
| EQPT | Add and drop channels are out of tolerance |
| EQPT | Add channel signal is too weak and VOA cannot adjust it to match the drop signal |
| EQPT | Power unit A failed |
| EQPT | Power unit B failed |

A.5.3.1 ONS 15216 EDFA2

The following table lists the alarms for the ONS 15216 EDFA2 R2.3 and 2.4.

Table A-18 GateWay/CORBA Alarms for the ONS 15216 EDFA2 R2.3, R2.4

| TMF Mapping | NE Native Probable Cause |
|--------------|------------------------------------|
| UNIDENTIFIED | Unknown alarm |
| EQPT | Excessive pump 1 current |
| EQPT | Excessive pump 2 current |
| EQPT | Excessive pump 1 laser temperature |
| EQPT | Excessive pump 2 laser temperature |
| EQPT | Loss of output power |
| EQPT | Loss of input power |
| EQPT | Gain out of range |
| EQPT | Case temperature out of range |
| EQPT | Power unit A failed |
| EQPT | Power unit B failed |
| EQPT | Database backup |
| EQPT | Database restore |
| EQPT | Cutover reset |
| EQPT | Software load |
| EQPT | Software reset |

A.5.3.2 ONS 15216 EDFA3

The following table lists the alarms for the ONS 15216 EDFA3 R1.0.

Table A-19 GateWay/CORBA Alarms for the ONS 15216 EDFA3 R1.1

| TMF Mapping | NE Native Probable Cause | Prime Optical Internal Index (Not Reported in the Notification) |
|--------------|---------------------------------|---|
| UNIDENTIFIED | Unknown alarm | 8701 |
| EQPT | Gain degrade high | 8702 |
| EQPT | Gain degrade low | 8703 |
| EQPT | Laser 1 bias degrade | 8704 |
| EQPT | Laser 2 bias degrade | 8705 |
| EQPT | Laser 1 bias fail | 8706 |
| EQPT | Laser 2 bias fail | 8707 |
| EQPT | Power degrade high LINE1TX port | 8708 |
| EQPT | Power degrade low LINE1TX port | 8709 |
| EQPT | Power fail low LINE1RX port | 8710 |

Table A-19 GateWay/CORBA Alarms for the ONS 15216 EDFA3 R1.1 (continued)

| TMF Mapping | NE Native Probable Cause | Prime Optical Internal Index (Not Reported in the Notification) |
|-------------|--------------------------------------|---|
| EQPT | Power fail low LINE1TX port | 8711 |
| EQPT | Power fail low LINE2RX port | 8712 |
| EQPT | VOA degrade high | 8713 |
| EQPT | VOA degrade low | 8714 |
| EQPT | VOA fail high | 8715 |
| EQPT | Case temperature out of range | 8716 |
| EQPT | Fiber temperature out of range | 8717 |
| EQPT | Excessive pump 1 temperature | 8718 |
| EQPT | Excessive pump 2 temperature | 8719 |
| EQPT | Backup/restore in progress | 8720 |
| EQPT | Data integrity fault | 8721 |
| EQPT | Equipment failure | 8722 |
| EQPT | Exceeding memory capacity | 8723 |
| EQPT | Exceeding flash file system capacity | 8724 |
| EQPT | Module communication failure | 8725 |
| EQPT | Power bus A alarm | 8726 |
| EQPT | Power bus B alarm | 8727 |

A.5.4 GateWay/CORBA Mapping—ONS 15305 and ONS 15305 CTC

The following table lists the GateWay/CORBA mapping for the ONS 15305 and ONS 15305 CTC.

Table A-20 GateWay/CORBA Mapping for the ONS 15305, ONS 15305 CTC

| TMF Mapping | NE Native Probable Cause |
|--------------|---------------------------------------|
| UNIDENTIFIED | ONS 15305 condition unknown |
| AIS | Alarm indication signal |
| AIS | Alarm indication signal network side |
| LOF | Alarm indication signal customer side |
| LOF | Loss of frame alignment |
| LOF | Loss of frame alignment network side |
| LOF | Loss of frame alignment customer side |
| LOP | Loss of pointer |
| LOS | Loss of signal |
| BER_SD | Degraded signal defect |
| LOM | Loss of multiframe alignment |
| RAI | Remote defect indication |

Table A-20 GateWay/CORBA Mapping for the ONS 15305, ONS 15305 CTC (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| TIM | Trace identifier mismatch |
| PLM | Payload mismatch |
| UNEQ | Unequipped |
| BER_SF | Excessive error defect |
| UNIDENTIFIED | Communication subsystem failure |
| SSF | Server signal failure |
| UNIDENTIFIED | Alarm condition detected on an alarm input port |
| EQPT | Device main unit failure |
| EQPT | High temperature alarm |
| EQPT | Fan failure |
| EQPT | Power input failure |
| EQPT | Power output failure |
| EQPT | Module mismatch |
| EQPT | Module removed |
| EQPT | Module failure |
| UNIDENTIFIED | MSP signaling problem |
| UNIDENTIFIED | Power module failure |
| UNIDENTIFIED | LAN port is not working |
| UNIDENTIFIED | WAN port is not working |
| UNIDENTIFIED | Too large delay on WAN channel |
| UNIDENTIFIED | Sequence number fail on WAN channel |
| UNIDENTIFIED | No synchronization source available |
| UNIDENTIFIED | Defecting hardware impacting internal T0 clock |
| UNIDENTIFIED | No T4 synchronization source available with QL >= QL min |
| UNIDENTIFIED | Inventory failure |
| UNIDENTIFIED | Diagnostic failure |
| UNIDENTIFIED | DXC inlet failure |
| UNIDENTIFIED | DXC inlet bit error |
| UNIDENTIFIED | Card isolated |
| UNIDENTIFIED | Card anomaly |
| UNIDENTIFIED | Hot swap failure |
| UNIDENTIFIED | Power input failure |
| UNIDENTIFIED | Transmit degrade on laser |
| UNIDENTIFIED | Transmit fail on laser |
| UNIDENTIFIED | Port activated without mapping to an available VC-12 |
| UNIDENTIFIED | Differential VC12 delay for the WAN port is greater than +/- 2 ms |

Table A-20 GateWay/CORBA Mapping for the ONS 15305, ONS 15305 CTC (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Rx buffer overflow in LAN or link interface |
| UNIDENTIFIED | Interport queue overflow in LAN or link interface |
| UNIDENTIFIED | Reset of the router/bridge required |
| UNIDENTIFIED | Device aborted FTP session |
| UNIDENTIFIED | Automatic switchover to backup link, main link fault |
| UNIDENTIFIED | Overflow layer 2 forward table |
| UNIDENTIFIED | Connection failed: frame relay switch and WAN gate |
| UNIDENTIFIED | Connection established: frame relay switch and WAN gate |
| UNIDENTIFIED | Error occurred during initialization |
| UNIDENTIFIED | Overflow in the client table |
| UNIDENTIFIED | Server not responding to dispatcher polling |
| UNIDENTIFIED | SNMP SET request was rejected |
| UNIDENTIFIED | Ping sequence completed |
| UNIDENTIFIED | Backup taken over for main server or server up after failure |
| UNIDENTIFIED | DHCP failed to allocate IP address to requesting host |
| UNIDENTIFIED | Overflow IGMP table |
| UNIDENTIFIED | Overflow PIM table |
| UNIDENTIFIED | Overflow condition in routing table |
| UNIDENTIFIED | Open gate IPX RIP table overflow |
| UNIDENTIFIED | Open gate IPX SAP table overflow |
| UNIDENTIFIED | FACS state NE with operation blockAndReport |
| UNIDENTIFIED | Zero hop routing connections table overflow |
| UNIDENTIFIED | No available IP virtual address |
| UNIDENTIFIED | Virtual IP address appeared as a source IP |
| UNIDENTIFIED | Source IP address sent an ARP specifying a virtual IP |
| UNIDENTIFIED | PPP link got an unrecognized secret |
| UNIDENTIFIED | FR DLCI status change |
| UNIDENTIFIED | CHAP failed communication |
| UNIDENTIFIED | IP SFFT overflow |
| UNIDENTIFIED | IP NFFT overflow |
| UNIDENTIFIED | IPX SFFT overflow |
| UNIDENTIFIED | IPX NFFT overflow |
| UNIDENTIFIED | IPM FFT overflow |
| UNIDENTIFIED | PAP failed communication |
| UNIDENTIFIED | Automatic switchover to backup link, main link fault |
| UNIDENTIFIED | Informational event |

Table A-20 GateWay/CORBA Mapping for the ONS 15305, ONS 15305 CTC (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | T0 sync switch |
| UNIDENTIFIED | T0QI failed |
| UNIDENTIFIED | T0QIDnu |
| UNIDENTIFIED | Switch to protection |
| UNIDENTIFIED | Switch to working |
| UNIDENTIFIED | MSP command timeout |
| UNIDENTIFIED | MSP command overruled |
| UNIDENTIFIED | Loop closed |
| UNIDENTIFIED | Loop opened |
| UNIDENTIFIED | Link up |
| UNIDENTIFIED | Link down |
| UNIDENTIFIED | The communication link has come up |
| UNIDENTIFIED | Failure in communication link |
| UNIDENTIFIED | Addressee of a protocol message not properly authenticated |
| UNIDENTIFIED | Reinitializing; configuration or the protocol entity implementation may be altered |
| UNIDENTIFIED | Reinitializing; neither configuration nor protocol entity implementation altered |
| UNIDENTIFIED | RMON alarm has crossed the rising threshold |
| UNIDENTIFIED | RMON alarm has crossed the falling threshold |
| UNIDENTIFIED | Loss of an adjacency with a PIM neighbor |
| UNIDENTIFIED | Device finished TFTP transaction |
| UNIDENTIFIED | Device initiated TFTP transaction |
| UNIDENTIFIED | Auto configuration completed successfully |
| UNIDENTIFIED | VLAN port dynamically added |
| UNIDENTIFIED | VLAN port dynamically changed |
| UNIDENTIFIED | Physical description device changed |
| UNIDENTIFIED | Port transition from learning to forwarding |
| UNIDENTIFIED | Port transition from forwarding to learning |
| UNIDENTIFIED | Packet drop due to the QoS policy |
| UNIDENTIFIED | Packet forwarded based on the QoS policy |
| UNIDENTIFIED | Protection link activated |
| UNIDENTIFIED | Working link activated |
| UNIDENTIFIED | MSP command timeout |
| UNIDENTIFIED | MSP command overruled |
| UNIDENTIFIED | Loss of external synchronization |
| UNIDENTIFIED | ONS 15305 condition unknown |

A.5.5 GateWay/CORBA Mapping—ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH

The following table lists the GateWay/CORBA mapping for ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH NEs.

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Normal condition |
| ENV | Failure detected external to the NE |
| ENV | External error |
| UNIDENTIFIED | Excessive switching |
| UNIDENTIFIED | Incoming failure condition |
| AIS | Alarm indication signal |
| AIS | Alarm indication signal—line |
| AIS | Alarm indication signal—path |
| FOP_APS | APS channel failure |
| FOP_APS | Byte failure |
| FOP_APS | Protection switching channel match failure |
| FOP_APS | Automatic protection switch mode mismatch |
| FOP_APS | Far-end protection line failure |
| UNIDENTIFIED | Bipolar violation |
| UNIDENTIFIED | Carrier loss on the LAN |
| UNIDENTIFIED | STS concatenation error |
| UNIDENTIFIED | Excess collisions on the LAN |
| UNIDENTIFIED | Facility failure |
| UNIDENTIFIED | Far-end block error |
| LOF | Loss of frame |
| LOP | Loss of pointer |
| LOP | Loss of pointer—path |
| LOS | Loss of signal |
| UNIDENTIFIED | Out of frame |
| UNIDENTIFIED | Path selector failure |
| RAI | Remote alarm indication |
| RAI | Remote failure indication |
| RAI | Remote failure indication—line |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| RAI | Remote failure indication—path |
| BER_SD | Signal degrade |
| UNIDENTIFIED | Severely errored frame |
| UNIDENTIFIED | Invalid alarm |
| BER_SF | Signal failure |
| UNIDENTIFIED | Signal label mismatch failures |
| UNIDENTIFIED | Payload defect indication |
| UNIDENTIFIED | Payload defect indication—path |
| PLM | Payload label mismatch—path |
| UNEQ | Unequipped—path |
| TIMING_SYNCH | Loss of synchronization |
| TIMING_SYNCH | Out of synchronization |
| TIMING_SYNCH | Primary synchronization reference failure |
| TIMING_SYNCH | Secondary synchronization reference failure |
| TIMING_SYNCH | Third synchronization reference failure |
| TIMING_SYNCH | Fourth synchronization reference failure |
| TIMING_SYNCH | Fifth synchronization reference failure |
| TIMING_SYNCH | Sixth synchronization reference failure |
| UNIDENTIFIED | Outgoing failure condition |
| RAI | Remote defect indication—line |
| RAI | Remote defect indication—path |
| TIMING_SYNCH | Free running synchronization mode |
| TIMING_SYNCH | Holdover synchronization mode |
| EQPT | Internal fault |
| UNIDENTIFIED | Internal error |
| UNIDENTIFIED | Internal message error |
| EQPT | Mismatch of equipment and attributes |
| UNIDENTIFIED | Watchdog timer timeout |
| ENV | Software fault or failure |
| ENV | Software fault—data integrity fault |
| UNIDENTIFIED | Program failure |
| EQPT | Control equipment failure |
| EQPT | Control processor failure |
| EQPT | Working memory failure |
| EQPT | Interconnection equipment failure |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| EQPT | Time slot interchange equipment failure |
| EQPT | Equipment failure |
| EQPT | High temperature |
| EQPT | Facility termination equipment failure |
| EQPT | Automatic laser shutdown |
| UNIDENTIFIED | Failure to release from protection |
| EQPT | Receiver failure |
| EQPT | Transmit failure |
| UNIDENTIFIED | Failure to switch to protection |
| EQPT | Equipment unit plug-in |
| ENV | Internal power failure |
| ENV | Fuse alarm |
| TIMING_SYNCH | Synchronization unit failure |
| EQPT | Synchronization switching equipment failure |
| EQPT | Equipment unit unplugged |
| EQPT | Manually caused abnormal condition |
| UNIDENTIFIED | Manual alarm cutoff |
| UNIDENTIFIED | Procedural error |
| EQPT | Improper removal |
| UNIDENTIFIED | Protection unit not available |
| UNIDENTIFIED | Protection switch |
| UNIDENTIFIED | Recovery or service protection action has been initiated |
| UNIDENTIFIED | Automatic system reset |
| UNIDENTIFIED | Cold restart |
| UNIDENTIFIED | Forced switch back to working |
| UNIDENTIFIED | Forced switch to protection |
| UNIDENTIFIED | Initialization initiated |
| UNIDENTIFIED | Lockout of protection |
| UNIDENTIFIED | Lockout of working |
| UNIDENTIFIED | Manual system reset |
| UNIDENTIFIED | Manual switch to internal clock |
| UNIDENTIFIED | Manual switch to primary reference |
| UNIDENTIFIED | Manual switch to secondary reference |
| UNIDENTIFIED | Manual switch to third reference |
| UNIDENTIFIED | Manual switch to fourth reference |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Manual switch to fifth reference |
| UNIDENTIFIED | Manual switch to sixth reference |
| UNIDENTIFIED | Manual switch back to working |
| UNIDENTIFIED | Manual switch to protection |
| UNIDENTIFIED | Power fail restart |
| EQPT | Software download in progress |
| TIMING_SYNCH | Switch to internal clock |
| TIMING_SYNCH | Switch to primary reference |
| TIMING_SYNCH | Switch to secondary reference |
| TIMING_SYNCH | Switch to third reference |
| TIMING_SYNCH | Switch to fourth reference |
| TIMING_SYNCH | Switch to fifth reference |
| TIMING_SYNCH | Switch to sixth reference |
| UNIDENTIFIED | Switched back to working |
| UNIDENTIFIED | Switched to protection |
| UNIDENTIFIED | Warm restart |
| UNIDENTIFIED | Ring is in wait-to-restore state |
| EQPT | Primary nonvolatile backup memory failure |
| EQPT | Secondary nonvolatile backup memory failure |
| EQPT | Control bus failure |
| EQPT | Control communications equipment failure |
| UNIDENTIFIED | Loopback |
| UNIDENTIFIED | Loopback, network |
| UNIDENTIFIED | Loopback, terminal |
| ENV | Fan failure |
| DCC_FAILURE | SDCC termination failure |
| UNIDENTIFIED | Loopback facility |
| EQPT | Payload bus failure to I/O slot 1 to 17 (XCON slot 8) |
| EQPT | Control bus 1 to 2 failure |
| EQPT | Invalid MAC address |
| EQPT | Board failure |
| EQPT | Diagnostics failure |
| EQPT | Medium access control failure |
| UNIDENTIFIED | Duplicate node ID |
| UNIDENTIFIED | Failure to switch to protection—ring |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Failure to switch to protection—span |
| UNIDENTIFIED | Manual switch back to working—ring |
| UNIDENTIFIED | Manual switch back to working—span |
| UNIDENTIFIED | Manual switch to protection—ring |
| UNIDENTIFIED | Manual switch to protection—span |
| UNIDENTIFIED | Forced switch back to working—ring |
| UNIDENTIFIED | Forced switch back to working—span |
| UNIDENTIFIED | Forced switch to protection—ring |
| UNIDENTIFIED | Forced switch to protection—span |
| UNIDENTIFIED | Lockout of protection—ring |
| UNIDENTIFIED | Lockout of protection—span |
| UNIDENTIFIED | Lockout of working—ring |
| UNIDENTIFIED | Lockout of working—span |
| UNIDENTIFIED | Ring is squelching traffic |
| FOP_APS | Inconsistent APS code |
| FOP_APS | Node ID mismatch |
| FOP_APS | Default K byte |
| FOP_APS | Connection loss |
| EQPT | TCC [A...B] to shelf slot 1...17 [DROP 1...8 TRUNK 1...2 TCC A...B XCON A...B] communication failure |
| TIMING_SYNCH | Fast start synchronization mode |
| FOP_APS | Improper APS code |
| UNIDENTIFIED | BLSR out of sync |
| AIS | Alarm indication signal—VT |
| RAI | Remote failure indication—VT |
| PLM | Signal label mismatch failure—payload label mismatch—VT |
| UNEQ | Signal label mismatch failure—unequipped—VT |
| UNIDENTIFIED | Peer state mismatch |
| EQPT | Facility termination equipment—receiver missing |
| EQPT | Facility termination equipment—transmitter missing |
| LOP | Loss of pointer—VT |
| LINK DOWN | Embedded operations channel failure—link down |
| TIMING_SYNCH | Failed to receive synchronization status message |
| TIMING_SYNCH | Synchronization status messages are disabled on this interface |
| TIMING_SYNCH | Primary reference source—stratum 1 traceable |
| TIMING_SYNCH | Synchronized—traceability unknown |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| TIMING_SYNCH | Stratum 2 traceable |
| TIMING_SYNCH | Transit node clock traceable |
| TIMING_SYNCH | Stratum 3E traceable |
| TIMING_SYNCH | Stratum 3 traceable |
| TIMING_SYNCH | SONET minimum clock traceable |
| TIMING_SYNCH | Stratum 4 traceable |
| TIMING_SYNCH | Do not use for synchronization |
| TIMING_SYNCH | Reserved for network synchronization use |
| UNIDENTIFIED | Failure to switch to protection—path |
| UNIDENTIFIED | Manual switch of working facility—equipment to protection—path |
| UNIDENTIFIED | Working facility—equipment forced to switch to protection—path |
| UNIDENTIFIED | Lockout of protection—path |
| UNIDENTIFIED | Automatic UPSR switch caused by [AIS LOP UNEQ PDI SFBER SDBER] |
| UNIDENTIFIED | DS3 idle condition |
| UNIDENTIFIED | DS1 loopback due to FEAC command |
| UNIDENTIFIED | DS1 loopback command sent to far end |
| UNIDENTIFIED | DS3 loopback due to FEAC command |
| UNIDENTIFIED | DS3 loopback command sent to far end |
| UNIDENTIFIED | DS2 loopback due to far-end command |
| UNIDENTIFIED | DS2 loopback command sent to far end |
| ENV | Far-end AIS |
| LOS | Far-end multiple DS1 LOS detected on DS3 |
| ENV | Far-end DS1 equipment failure—non-service affecting |
| ENV | Far-end DS1 equipment failure—service affecting |
| LOS | Far-end single DS1 LOS |
| ENV | Far-end DS3 equipment failure—non-service affecting |
| ENV | Far-end DS3 equipment failure—service affecting |
| ENV | Far-end common equipment failure—non-service affecting |
| UNIDENTIFIED | Far end idle |
| LOS | Far end LOS |
| LOF | Far end LOF |
| UNIDENTIFIED | Performance monitor threshold crossing alert |
| UNIDENTIFIED | Ethernet bridge is new root of spanning tree |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Ethernet bridge topology change |
| UNIDENTIFIED | BLSR tables resynchronized |
| ENV | System reboot |
| UNIDENTIFIED | Manual switch request on facility—equipment |
| UNIDENTIFIED | Forced switch request on facility or equipment |
| UNIDENTIFIED | Lockout switch request on facility—equipment |
| UNIDENTIFIED | RMON histories and alarms reset reboot |
| UNIDENTIFIED | RMON alarm |
| LOS | Video interface card loss of video IF signal |
| LOS | VIC loss of video baseband signal |
| LOS | VIC loss of audio FM signal |
| LOS | VIC loss of audio baseband channel [1...4] signal |
| TIM | STS path trace identifier mismatch |
| ENV | NE power failure at connector A |
| ENV | NE power failure at connector B |
| EQPT | Free memory on card very low |
| EQPT | Free memory on card near zero |
| UNIDENTIFIED | Exercise request on ring |
| UNIDENTIFIED | Exercise request on span |
| UNIDENTIFIED | Squelching path |
| UNIDENTIFIED | Extra traffic preempted |
| UNIDENTIFIED | Far-end lockout of working—ring |
| UNIDENTIFIED | Far-end lockout of working—span |
| UNIDENTIFIED | Far-end lockout of protection—ring |
| UNIDENTIFIED | Far-end lockout of protection—all spans |
| UNIDENTIFIED | Far-end working facility forced to switch to protection—ring |
| UNIDENTIFIED | Far-end working facility forced to switch to protection—span |
| UNIDENTIFIED | Far-end manual switch of working facility to protection—ring |
| UNIDENTIFIED | Far-end manual switch of working facility to protection—span |
| UNIDENTIFIED | Far-end exercising ring |
| UNIDENTIFIED | Far-end exercising span |
| ENV | Far-end BER threshold passed for signal failure—ring |
| ENV | Far-end BER threshold passed for signal failure—span |
| ENV | Far-end BER threshold passed for signal degrade—ring |
| ENV | Far-end BER threshold passed for signal degrade—span |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| ENV | APS channel—far-end protection line signal degrade |
| UNIDENTIFIED | Ring switch is active on the east side |
| UNIDENTIFIED | Ring switch is active on the west side |
| UNIDENTIFIED | Span switch is active on the east side |
| UNIDENTIFIED | Span switch is active on the west side |
| UNIDENTIFIED | Unidirectional full pass-through is active |
| UNIDENTIFIED | Bidirectional full pass-through is active |
| UNIDENTIFIED | K bytes pass-through is active |
| UNIDENTIFIED | Ring is segmented |
| UNIDENTIFIED | Ring topology is under construction |
| UNIDENTIFIED | Lockout of protection—all spans |
| UNIDENTIFIED | Far-end of fiber is provisioned with different ring ID |
| UNIDENTIFIED | Both ends of fiber provisioned as east or both as west |
| SECURITY_VIOLATION | Security—invalid login—see audit trail |
| UNIDENTIFIED | Autonomous messages inhibited |
| UNIDENTIFIED | Traffic storm on LAN; LAN temporarily disabled |
| UNIDENTIFIED | REPT^DBCHG messages inhibited |
| SECURITY_VIOLATION | Security—user ID has expired |
| EQPT | Partial fan failure |
| UNIDENTIFIED | Force switch request on ring |
| UNIDENTIFIED | Force switch request on span |
| UNIDENTIFIED | Lockout switch request on ring |
| UNIDENTIFIED | Lockout switch request on span |
| UNIDENTIFIED | Manual switch request on ring |
| UNIDENTIFIED | Manual switch request on span |
| EQPT | Peer-to-peer slot communication failure |
| EQPT | Peer-to-peer slot communication failure |
| EQPT | TCC A to shelf slot communication failure |
| EQPT | TCC B to shelf slot communication failure |
| EQPT | Interconnection equipment failure—working XC payload bus |
| EQPT | Interconnection equipment failure—protect XC payload bus |
| EQPT | Inhibit switch to protect request on equipment |
| EQPT | Inhibit switch to working request on equipment |
| BER_SD | BER threshold exceeded for signal degrade—line |
| BER_SD | BER threshold exceeded for signal degrade—path |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| BER_SF | BER threshold exceeded for signal failure—line |
| BER_SF | BER threshold exceeded for signal failure—path |
| UNIDENTIFIED | Exercising ring successfully |
| UNIDENTIFIED | Exercising span successfully |
| UNIDENTIFIED | Span is in wait-to-restore state |
| EQPT | Peer card not responding |
| UNIDENTIFIED | Exercise request on ring failed |
| UNIDENTIFIED | Exercise request on span failed |
| UNIDENTIFIED | Far-end lockout of protection—span |
| EQPT | Manufacturing data memory (EEPROM) failure |
| EQPT | Replaceable equipment/unit is missing |
| ENV | Software download failure |
| TIM | TIM section—trace identifier mismatch failure |
| AIS | AIS—multiplex section—alarm indication signal |
| RAI | RFI—multiplex section—remote failure/alarm indication |
| TIM | TIM—high order—trace identifier mismatch failure |
| AU_AIS | AIS—administration unit—alarm indication signal |
| LOP | LOP—administration unit—loss of pointer |
| UNEQ | SLMF—unequipped high order—path unequipped |
| PLM | SLMF—PLM high order—path label mismatch |
| RAI | RFI—high order—remote failure/alarm indication |
| LOP | LOP—tributary unit—loss of pointer |
| TU-AIS | AIS—tributary unit—alarm indication signal |
| UNEQ | SLMF—unequipped low order—path unequipped |
| PLM | SLMF—PLM low order—path label mismatch |
| TIM | TIM low order—trace identifier mismatch failure |
| RAI | RFI—low order—remote failure/alarm indication |
| TIMING_SYNCH | G811—primary reference clock traceable |
| TIMING_SYNCH | G812—transit node clock traceable |
| TIMING_SYNCH | G812—local node clock traceable |
| TIMING_SYNCH | G813—synchronous equipment timing source traceable |
| UNIDENTIFIED | E1 loopback due to FEAC command |
| UNIDENTIFIED | E1 loopback command sent to far end |
| UNIDENTIFIED | E3 loopback due to FEAC command |
| ENV | Far-end multiple E1 LOS detected on E3 |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| ENV | Far-end E1 equipment failure non-service affecting |
| ENV | Far-end E1 equipment failure service affecting |
| ENV | Far-end single E1 LOS |
| ENV | Far-end E3 equipment failure service affecting |
| UNIDENTIFIED | E3 loopback command sent to far end |
| ENV | Far-end E3 equipment failure non-service affecting |
| ENV | Low voltage—battery A |
| ENV | High voltage—battery A |
| ENV | Low voltage—battery B |
| ENV | High voltage—battery B |
| UNIDENTIFIED | Procedural error—MS-SPRing out of sync |
| UNIDENTIFIED | MS-SPRing tables resynchronized |
| UNIDENTIFIED | Automatic SNCP switch caused by [AIS LOP UNEQ PDI SFBER SDBER] |
| UNIDENTIFIED | STM concatenation error |
| UNIDENTIFIED | E3 idle condition |
| UNIDENTIFIED | IOS config copy failed |
| UNIDENTIFIED | IOS config copy in progress |
| UNIDENTIFIED | Alarms suppressed by user command |
| UNIDENTIFIED | Alarms suppressed for maintenance |
| UNIDENTIFIED | — |
| UNIDENTIFIED | Synchronization reference frequency out of bounds |
| UNIDENTIFIED | Ether Tx excess flow control |
| UNIDENTIFIED | Ether Tx oversubscribed |
| UNIDENTIFIED | Transport layer failure |
| UNIDENTIFIED | Ether Rx excess flow control |
| UNIDENTIFIED | Ether Rx oversubscribed |
| UNIDENTIFIED | Ether Tx underrun |
| UNIDENTIFIED | SNTP host failure |
| UNIDENTIFIED | DS3 frame format mismatch |
| UNIDENTIFIED | Alarms/events suppressed for this object |
| BER_SD | BER threshold exceeded for signal degrade—high order |
| BER_SF | BER threshold exceeded for signal failure—high order |
| BER_SD | BER threshold exceeded for signal degrade—low order |
| BER_SF | BER threshold exceeded for signal failure—low order |
| UNIDENTIFIED | Failure to switch to protection—high-order path |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | Failure to switch to protection—low-order path |
| UNIDENTIFIED | Wait to restore |
| ENV | Extreme high voltage—battery A |
| ENV | Extreme low voltage—battery A |
| ENV | Extreme high voltage—battery B |
| ENV | Extreme low voltage—battery B |
| UNIDENTIFIED | Switching matrix module failure |
| UNIDENTIFIED | Signaling unable to set up circuit |
| UNIDENTIFIED | RSVP hello FSM to neighbor down |
| UNIDENTIFIED | LMP hello FSM to control channel down |
| UNIDENTIFIED | LMP neighbor discovery has failed |
| UNIDENTIFIED | Unauthorized incoming signaling request |
| UNIDENTIFIED | Signaled circuit going down |
| UNIDENTIFIED | Autonomous PM report message inhibited |
| EQPT | I/O slot to XCON communication failure |
| UNIDENTIFIED | Forced switch to primary reference |
| UNIDENTIFIED | Forced switch to secondary reference |
| UNIDENTIFIED | Forced switch to third reference |
| UNIDENTIFIED | Forced switch to internal clock |
| LOM | LOF—administration unit—loss of multiframe |
| UNIDENTIFIED | Admin logout of user |
| UNIDENTIFIED | User locked out |
| UNIDENTIFIED | Admin lockout of user |
| UNIDENTIFIED | Admin lockout clear |
| SECURITY_VIOLATION | Security—invalid login—username—see audit log |
| SECURITY_VIOLATION | Security—invalid login—password—see audit log |
| SECURITY_VIOLATION | Security—invalid login—locked out—see audit log |
| SECURITY_VIOLATION | Security—invalid login—already logged on—see audit log |
| UNIDENTIFIED | Login of user |
| UNIDENTIFIED | Automatic logout of idle user |
| UNIDENTIFIED | Logout of user |
| UNIDENTIFIED | Cross-connect loopback |
| UNIDENTIFIED | Error in startup config |
| UNIDENTIFIED | No startup config |
| EQPT | Laser approaching end of life |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Database backup failed |
| UNIDENTIFIED | Database restore failed |
| UNIDENTIFIED | 8B10B out of sync |
| AIS | ODUk—alarm indication signal |
| AIS | OTUk—alarm indication signal |
| UNIDENTIFIED | OTUk—backward defect indicator |
| UNIDENTIFIED | ODUk—backward defect indicator |
| UNIDENTIFIED | FEC uncorrected word |
| UNIDENTIFIED | GCC embedded operation channel failure |
| UNIDENTIFIED | OTUk—incoming alignment error |
| UNIDENTIFIED | ODUk—locked defect—PM |
| LOM | Loss of multiframe |
| UNIDENTIFIED | ODUk—open connection indication |
| PLM | Payload type identifier mismatch |
| TIM | ODUk—trail trace identifier mismatch |
| TIM | OTUk—trail trace identifier mismatch |
| EQPT | Equipment high laser bias |
| EQPT | Equipment high laser temp |
| EQPT | Equipment high laser Peltier |
| EQPT | Equipment high Rx power |
| EQPT | Equipment high Tx power |
| EQPT | Equipment high Rx temperature |
| EQPT | Equipment low Tx temperature |
| EQPT | Equipment high transceiver voltage |
| EQPT | Equipment low laser bias |
| EQPT | Equipment low laser temp |
| EQPT | Equipment low laser Peltier |
| EQPT | Equipment low Rx power |
| EQPT | Equipment low Tx power |
| EQPT | Equipment low transceiver voltage |
| EQPT | Equipment Rx locked |
| EQPT | Equipment squelched |
| EQPT | Equipment Tx locked |
| BER_SF | OTUk—signal failure |
| BER_SF | ODUk—signal failure |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| BER_SD | OTUk—signal degrade |
| BER_SD | ODUk—signal degrade |
| UNIDENTIFIED | Pluggable port missing |
| UNIDENTIFIED | Pluggable port rate mismatch |
| SECURITY_VIOLATION | Pluggable port security code mismatch |
| UNIDENTIFIED | TCI not selected |
| UNIDENTIFIED | TCI 1 clock failure |
| UNIDENTIFIED | ODUk—backward defect indicator |
| UNIDENTIFIED | ODUk—open connection indication |
| UNIDENTIFIED | ODUk—locked defect—[TCM1 TCM2] |
| AIS | ODUk—alarm indication signal |
| TIM | ODUk—trail trace identifier mismatch |
| BER_SD | ODUk—signal degrade—[TCM1 TCM2] |
| BER_SF | ODUk—signal failure—[TCM1 TCM2] |
| UNIDENTIFIED | ODUk—open connection indication |
| UNIDENTIFIED | ODUk—locked defect—TCM1 |
| AIS | ODUk—alarm indication signal |
| TIM | ODUk—trail trace identifier mismatch |
| BER_SD | ODUk—signal degrade—TCM1 |
| BER_SF | ODUk—signal failure—TCM1 |
| LOF | OTUk—loss of frame |
| UNIDENTIFIED | TCI 2 clock failure |
| UNIDENTIFIED | Audit log 80 percent full |
| UNIDENTIFIED | Module communication failure |
| UNIDENTIFIED | Need to save running config |
| UNIDENTIFIED | Audit log 100 percent full; oldest records will be lost |
| UNIDENTIFIED | Standby database out of sync |
| EQPT | Redundant power capability lost |
| EQPT | Equipment wavelength mismatch |
| UNIDENTIFIED | DSP communication failure |
| UNIDENTIFIED | DSP failure |
| UNIDENTIFIED | Loss of channel |
| UNIDENTIFIED | FEC mismatch |
| UNIDENTIFIED | Optical power degrade low |
| UNIDENTIFIED | Optical power degrade high |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| SECURITY_VIOLATION | Security intrusion attempt detected—see audit log |
| SECURITY_VIOLATION | Security intrusion attempt detected—see audit log |
| UNIDENTIFIED | Variable optical attenuator degrade low |
| UNIDENTIFIED | Variable optical attenuator degrade high |
| UNIDENTIFIED | Variable optical attenuator failure low |
| UNIDENTIFIED | Variable optical attenuator failure high |
| UNIDENTIFIED | Laser bias degrade |
| UNIDENTIFIED | Laser bias failure |
| UNIDENTIFIED | Laser temperature degrade |
| UNIDENTIFIED | Optical amplifier gain degrade low |
| UNIDENTIFIED | Optical amplifier gain degrade high |
| UNIDENTIFIED | Optical amplifier gain failure low |
| UNIDENTIFIED | Optical amplifier gain failure high |
| UNIDENTIFIED | Laser auto power reduction |
| UNIDENTIFIED | Case temperature degrade |
| UNIDENTIFIED | Fiber temperature degrade |
| UNIDENTIFIED | Shutter open |
| UNIDENTIFIED | AWG temperature degrade |
| UNIDENTIFIED | AWG temperature failure |
| UNIDENTIFIED | AWG over temperature |
| UNIDENTIFIED | Shutter insertion loss variation degrade low |
| UNIDENTIFIED | Shutter insertion loss variation degrade high |
| UNIDENTIFIED | AWG warm up |
| UNIDENTIFIED | Plug-in module communication failure |
| UNIDENTIFIED | Optical amplifier initialization |
| UNIDENTIFIED | Optical channel connection failure |
| UNIDENTIFIED | Optical channel activation failure |
| UNIDENTIFIED | Optical channel deactivation failure |
| UNIDENTIFIED | Network topology incomplete |
| UNIDENTIFIED | Optical network type mismatch |
| UNIDENTIFIED | Automatic power control failure |
| UNIDENTIFIED | Automatic power control disabled |
| UNIDENTIFIED | Ring ID mismatch |
| TIM | TIM section monitor—trace identifier mismatch failure |
| UNIDENTIFIED | Optical channel incomplete |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| UNIDENTIFIED | Enhanced remote failure indication—path—server |
| UNIDENTIFIED | Enhanced remote failure indication—path—connectivity |
| UNIDENTIFIED | Enhanced remote failure indication—path—payload |
| UNIDENTIFIED | Automatic laser shutdown |
| UNIDENTIFIED | Firewall has been disabled |
| UNIDENTIFIED | Optical power failure low |
| UNIDENTIFIED | Optical power failure high |
| EQPT | Battery failure |
| EQPT | Extreme high voltage |
| EQPT | Extreme low voltage |
| UNIDENTIFIED | High voltage |
| UNIDENTIFIED | Low voltage |
| UNIDENTIFIED | Connection equipment mismatch |
| UNIDENTIFIED | Disable inactive user |
| UNIDENTIFIED | Disable inactive user |
| UNIDENTIFIED | Suspend user |
| UNIDENTIFIED | Suspend user clear |
| UNIDENTIFIED | Line DCC termination failure |
| UNIDENTIFIED | Multiplex section DCC termination failure |
| UNIDENTIFIED | Gigabit Ethernet out of sync |
| AIS | Alarm indication signal in Tx |
| AIS | Remote alarm indication in Tx |
| LOF | Loss of frame in Tx |
| LOS | Incoming signal loss on fibre channel interface |
| UNIDENTIFIED | Incoming synchronization loss on fibre channel interface |
| UNIDENTIFIED | Out of frame detected by GFP receiver |
| UNIDENTIFIED | Client signal loss frames detected by GFP receiver |
| UNIDENTIFIED | Client synchronization loss frames detected by GFP receiver |
| UNIDENTIFIED | Sequence mismatch |
| UNIDENTIFIED | Loss of alignment |
| UNIDENTIFIED | Out of use—administrative command |
| UNIDENTIFIED | Out of use—transport failure |
| UNIDENTIFIED | VCAT group down |
| UNIDENTIFIED | VCAT group degraded |
| UNIDENTIFIED | VCAT group incomplete |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | K byte channel failure |
| UNIDENTIFIED | Industrial high temperature |
| FOP_APS | APS invalid mode |
| UNIDENTIFIED | IP address already in use within the same DCC area |
| UNIDENTIFIED | Node name already in use within the same DCC area |
| UNIDENTIFIED | Rear panel Ethernet link removed |
| UNIDENTIFIED | Manual switch to protect resulted in no traffic switch |
| UNIDENTIFIED | Manual switch back to working resulted in no traffic switch |
| UNIDENTIFIED | Forced switch to protection resulted in no traffic switch |
| UNIDENTIFIED | Forced switch back to working resulted in no traffic switch |
| LOS | Incoming payload signal absent |
| UNIDENTIFIED | Incoming overhead signal absent |
| UNIDENTIFIED | Optical safety remote interlock on |
| UNIDENTIFIED | OSPF hello fail |
| UNIDENTIFIED | Automatic power control correction skipped |
| UNIDENTIFIED | Plug-in module range settings mismatch |
| UNIDENTIFIED | APC cannot set value due to range limits |
| UNIDENTIFIED | Automatic WDM ANS finished |
| UNIDENTIFIED | Port failure |
| UNIDENTIFIED | Unreachable port target power |
| UNIDENTIFIED | Port add power degrade low |
| UNIDENTIFIED | Port add power degrade high |
| UNIDENTIFIED | Port add power fail low |
| UNIDENTIFIED | Port add power fail high |
| UNIDENTIFIED | Equipment power failure at connector A |
| UNIDENTIFIED | Equipment power failure at connector B |
| UNIDENTIFIED | Equipment power failure at return connector A |
| UNIDENTIFIED | Far-end manual switch back to working—span |
| UNIDENTIFIED | Far-end forced switch back to working—span |
| UNIDENTIFIED | Universal transponder module hardware failure |
| UNIDENTIFIED | Universal transponder module communication failure |
| UNIDENTIFIED | Automatic power control terminated on manual request |
| UNIDENTIFIED | Fibre channel distance extension credit starvation |
| PLM | GFP user payload mismatch |
| UNIDENTIFIED | GFP fibre channel distance extension mismatch |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | GFP fibre channel distance extension buffer starvation |
| BER_SF | GFP client signal fail detected |
| LOF | GFP loss of frame delineation |
| UNIDENTIFIED | GFP extension header mismatch |
| UNIDENTIFIED | Signal loss on data interface |
| UNIDENTIFIED | Encapsulation mismatch—path |
| UNIDENTIFIED | Encapsulation mismatch—VT |
| UNIDENTIFIED | Encapsulation mismatch high order—path |
| UNIDENTIFIED | Encapsulation mismatch low order—path |
| UNIDENTIFIED | Synchronization loss on data interface |
| AIS | ODUk-1...4—alarm indication signal |
| UNIDENTIFIED | LCAS control word CRC check failure |
| UNIDENTIFIED | Duplicate serial number detected on a pluggable entity |
| UNIDENTIFIED | LCAS VCG member Tx side in DNU state |
| UNIDENTIFIED | LCAS VCG member Tx side in ADD state |
| UNIDENTIFIED | LCAS VCG member Rx side in FAIL state |
| UNIDENTIFIED | Optimized 1+1 APS primary facility |
| UNIDENTIFIED | Optimized 1+1 APS primary section mismatch |
| UNIDENTIFIED | Optimized 1+1 APS invalid primary section |
| UNIDENTIFIED | Composite clock high line voltage |
| BER_SD | BER threshold exceeded for signal degrade—VT |
| BER_SF | BER threshold exceeded for signal failure—VT |
| UNIDENTIFIED | Alarms suppressed on out-of-group VCAT member |
| UNIDENTIFIED | Span length out of range |
| UNIDENTIFIED | Temperature reading mismatch between SC cards |
| UNIDENTIFIED | Voltage reading mismatch between SC cards |
| TIM | VT path trace identifier mismatch |
| UNIDENTIFIED | BLSR software version mismatch |
| UNIDENTIFIED | Bridge and roll occurred |
| UNIDENTIFIED | Bridge and roll is pending a valid signal |
| TIM | Open I/O slot(s) |
| UNIDENTIFIED | ISIS adjacency failure |
| SECURITY_VIOLATION | Session time limit expired |
| SECURITY_VIOLATION | User password change required |
| SECURITY_VIOLATION | Remote authentication fail |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| TIM | Section trace identifier mismatch |
| TIM | Regenerator section trace identifier mismatch |
| UNIDENTIFIED | Switching matrix module failure—working |
| UNIDENTIFIED | Switching matrix module failure—protect |
| UNIDENTIFIED | Provisioning mismatch |
| UNIDENTIFIED | Slot communication disabled |
| UNIDENTIFIED | MSSP software version mismatch |
| UNIDENTIFIED | Archival of audit log failed |
| UNIDENTIFIED | RPR wrapped |
| UNIDENTIFIED | Software mismatch |
| UNIDENTIFIED | Link layer keepalive failure |
| UNIDENTIFIED | Bad packet count exceeds threshold |
| UNIDENTIFIED | Autonegotiation remote failure indication |
| UNIDENTIFIED | Shelf communication failure |
| UNIDENTIFIED | Duplicated shelf identifier |
| UNIDENTIFIED | Ring is squelching STS traffic |
| UNIDENTIFIED | Ring is squelching VT traffic |
| UNIDENTIFIED | Clock bus failure—shelf controller A |
| UNIDENTIFIED | Clock bus failure—shelf controller B |
| UNIDENTIFIED | Loss of clock from mate shelf controller |
| UNIDENTIFIED | Payload missing indication |
| UNIDENTIFIED | Forward defect indication |
| UNIDENTIFIED | Optical termination incomplete |
| UNIDENTIFIED | Span loss not checked |
| UNIDENTIFIED | Ring is squelching higher order traffic |
| UNIDENTIFIED | Ring is squelching lower order traffic |
| UNIDENTIFIED | Trail signal fail |
| UNIDENTIFIED | DS1 loopback command sent to far end |
| UNIDENTIFIED | Multiplex section—signal degraded |
| UNIDENTIFIED | Multiplex section—excessive errors |
| UNIDENTIFIED | High-order path—signal degraded |
| UNIDENTIFIED | High-order path—excessive errors |
| UNIDENTIFIED | Low-order path—signal degraded |
| UNIDENTIFIED | Low-order path—excessive errors |
| UNIDENTIFIED | Regenerator section—DCC termination failure |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Network memory pool low |
| UNIDENTIFIED | OSPF routing table overflow |
| UNIDENTIFIED | Auto laser shutdown disabled |
| UNIDENTIFIED | RPR protection is active |
| UNIDENTIFIED | Max RPR station number exceeded |
| UNIDENTIFIED | RPR protection configuration mismatched |
| UNIDENTIFIED | Reserved bandwidth link rate exceeded on ringlet [0 1] |
| UNIDENTIFIED | RPR interface in pass-through mode |
| UNIDENTIFIED | RPR peer node is missing |
| UNIDENTIFIED | RPR RI failure |
| UNIDENTIFIED | RPR signal failure |
| UNIDENTIFIED | RPR signal degrade |
| UNIDENTIFIED | RPR span mismatch |
| UNIDENTIFIED | LMP failure |
| UNIDENTIFIED | LMP signal degrade |
| UNIDENTIFIED | LMP signal failure |
| UNIDENTIFIED | LMP unallocated data link |
| UNIDENTIFIED | APC wrong gain setpoint |
| EQPT | Non-Cisco PPM inserted |
| EQPT | Unqualified PPM inserted |
| UNIDENTIFIED | Fast automatic protection switching |
| UNIDENTIFIED | Fast automatic protection switching config mismatch |
| UNIDENTIFIED | ADM peer cards interlink failure |
| EQPT | Fan tray mismatch |
| UNIDENTIFIED | Fibre channel distance extension function not established |
| UNIDENTIFIED | LCAS sink group error |
| UNIDENTIFIED | LCAS VCG member Rx side in DNU state |
| UNIDENTIFIED | Card/ports unable to provide protection |
| UNIDENTIFIED | TCC front port link loss |
| UNIDENTIFIED | Shutter insertion loss variation degrade low |
| UNIDENTIFIED | Shutter insertion loss variation degrade high |
| UNIDENTIFIED | Idle signal condition |
| UNIDENTIFIED | Idle signal condition in TX |
| UNIDENTIFIED | Automatic power control correction skipped |
| UNIDENTIFIED | Port add power fail low |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Port add power fail high |
| UNIDENTIFIED | Span length out of range |
| UNIDENTIFIED | Port add power degrade low |
| UNIDENTIFIED | Port add power degrade high |
| UNIDENTIFIED | DCU loss failure |
| UNIDENTIFIED | OCHNC maintenance |
| UNIDENTIFIED | K-byte channel failure |
| UNIDENTIFIED | PRP protection configuration mismatched |
| UNIDENTIFIED | Reserved bandwidth link rate exceeded on ring Let0 |
| UNIDENTIFIED | Reserved bandwidth link rate exceeded on ring Let1 |
| UNIDENTIFIED | Security invalid login—locked out |
| UNIDENTIFIED | Security invalid login—already logged on |
| UNIDENTIFIED | Syslog messages |
| UNIDENTIFIED | Configuration events |
| UNIDENTIFIED | Link up/link down trap |
| UNIDENTIFIED | Cold/warm start trap |
| UNIDENTIFIED | Authentication failure notification |
| EQPT | Unqualified PPM inserted |
| UNIDENTIFIED | Fast automatic protection switching |
| UNIDENTIFIED | Fast automatic protection switching config mismatch |
| UNIDENTIFIED | ADM peer cards interlink failure |
| EQPT | Fan tray mismatch |
| UNIDENTIFIED | Fibre channel distance extension function not established |
| UNIDENTIFIED | LCAS sink group error |
| UNIDENTIFIED | LCAS VCG member Rx side in DNU state |
| UNIDENTIFIED | Card/ports unable to provide protection |
| UNIDENTIFIED | TCC front port link loss |
| UNIDENTIFIED | Shutter insertion loss variation degrade low |
| UNIDENTIFIED | Shutter insertion loss variation degrade high |
| UNIDENTIFIED | Idle signal condition |
| UNIDENTIFIED | Idle signal condition in TX |
| UNIDENTIFIED | Automatic power control correction skipped |
| UNIDENTIFIED | Port add power fail low |
| UNIDENTIFIED | Port add power fail high |
| UNIDENTIFIED | DCU loss failure |

Table A-21 GateWay/CORBA Mapping for the ONS 15310 CA, ONS 15310 MA, ONS 15310 MA SDH, ONS 15327 SONET, ONS 15454 SONET, ONS 15454 SDH, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | OCHNC maintenance |
| UNIDENTIFIED | K-byte channel failure |
| UNIDENTIFIED | PRP protection configuration mismatched |
| UNIDENTIFIED | Reserved bandwidth link rate exceeded on ring Let0 |
| UNIDENTIFIED | Reserved bandwidth link rate exceeded on ring Let1 |
| UNIDENTIFIED | Security invalid login—locked out |
| UNIDENTIFIED | Security invalid login—already logged on |
| UNIDENTIFIED | Syslog messages |
| UNIDENTIFIED | Configuration events |
| UNIDENTIFIED | Link up/link down trap |
| UNIDENTIFIED | Cold/warm start trap |
| UNIDENTIFIED | Authentication failure notification |
| UNIDENTIFIED | Alarm indication signal in TX—customer installation |
| UNIDENTIFIED | Remote alarm indication in TX—customer installation |

A.5.6 GateWay/CORBA Mapping—ONS 15454-M2, ONS 15454-M6, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH

The following table lists the GateWay/CORBA mapping for the ONS 15454-M2, ONS 15454-M6, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH NEs.

Table A-22 GateWay/CORBA Mapping for the ONS 15454-M2, ONS 15454-M6, CPT 200, CPT 200 SDH, CPT 600, and CPT 600 SDH

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Ethernet OSC termination failure |
| UNIDENTIFIED | Laser shutdown due to insertion of non-Cisco PPM |
| UNIDENTIFIED | Software signature verification failure |
| UNIDENTIFIED | Active volume software signature verification failure |
| UNIDENTIFIED | Protect volume software signature verification failure |
| UNIDENTIFIED | Channel shutdown due to wavelength drift |
| UNIDENTIFIED | Software activation failure |
| UNIDENTIFIED | USB write failure |
| UNIDENTIFIED | USB sync in progress |

A.5.7 GateWay/CORBA Mapping—PTS

The following table lists the GateWay/CORBA mapping for PTS.

Table A-23 GateWay/CORBA Mapping for PTS

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | Satellite panel discovery failure |
| UNIDENTIFIED | Satellite panel active link failure |
| UNIDENTIFIED | Satellite panel communication failure |
| UNIDENTIFIED | Satellite panel improper configuration |
| UNIDENTIFIED | Satellite panel fan mismatch of equipment and attributes |
| UNIDENTIFIED | Satellite panel fan failure |
| UNIDENTIFIED | Satellite panel partial fan failure |
| UNIDENTIFIED | Satellite panel fan manufacturing data memory (EEPROM) failure |
| UNIDENTIFIED | Satellite panel fan unit is missing |
| UNIDENTIFIED | Satellite panel industrial high temperature |
| UNIDENTIFIED | Satellite panel high temperature |
| UNIDENTIFIED | Satellite panel battery failure A |
| UNIDENTIFIED | Packet transport service failed |
| UNIDENTIFIED | PMD degrade |
| UNIDENTIFIED | License will expire within 24 hours |
| UNIDENTIFIED | License will expire at some time (after 1 day, but before 14 days) |
| UNIDENTIFIED | License expired |
| UNIDENTIFIED | License count violation |
| UNIDENTIFIED | Temporary license is in use |
| UNIDENTIFIED | Evaluation license is in use |
| UNIDENTIFIED | License is missing |
| UNIDENTIFIED | Planned switchover |
| UNIDENTIFIED | Protection card configuration mismatch |
| UNIDENTIFIED | Running low on resources |
| UNIDENTIFIED | No more resources available |
| UNIDENTIFIED | Route processor switchover occurred |
| UNIDENTIFIED | Standby TCC-NE clock is internal clock |
| UNIDENTIFIED | Pseudowire down |
| UNIDENTIFIED | Working pseudowire control plane down |
| UNIDENTIFIED | Protect pseudowire control plane down |
| UNIDENTIFIED | Working pseudowire connectivity check down |
| UNIDENTIFIED | Protect pseudowire connectivity check down |
| UNIDENTIFIED | Pseudowire traffic switched protection |

Table A-23 GateWay/CORBA Mapping for PTS (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Working pseudowire local AC Tx port fault |
| UNIDENTIFIED | Protect pseudowire local AC Tx port fault |
| UNIDENTIFIED | Working pseudowire local AC Rx port fault |
| UNIDENTIFIED | Protect pseudowire local AC Rx port fault |
| UNIDENTIFIED | Working pseudowire remote AC Tx port fault |
| UNIDENTIFIED | Protect pseudowire remote AC Tx port fault |
| UNIDENTIFIED | Working pseudowire remote AC Rx port fault |
| UNIDENTIFIED | Protect pseudowire remote AC Rx port fault |
| UNIDENTIFIED | Working local pseudowire not forwarding |
| UNIDENTIFIED | Protect local pseudowire not forwarding |
| UNIDENTIFIED | Working remote pseudowire not forwarding |
| UNIDENTIFIED | Protected remote pseudowire not forwarding |
| UNIDENTIFIED | TP tunnel down |
| UNIDENTIFIED | Working LSP down |
| UNIDENTIFIED | Protect LSP down |
| UNIDENTIFIED | Working LSP alarm indication signal |
| UNIDENTIFIED | Protect LSP alarm indication signal |
| UNIDENTIFIED | Working LSP remote defect indication |
| UNIDENTIFIED | Protect LSP remote defect indication |
| UNIDENTIFIED | BFD down |
| UNIDENTIFIED | TP traffic switched from working to protection |
| UNIDENTIFIED | Working TP lockout |
| UNIDENTIFIED | Protect TP lockout |
| UNIDENTIFIED | EFP failed |
| UNIDENTIFIED | TE tunnel down |
| UNIDENTIFIED | MAC system limit reached |
| UNIDENTIFIED | MAC bridge domain limit reached |
| UNIDENTIFIED | Working LSP link down indication |
| UNIDENTIFIED | Protect LSP link down indication |
| UNIDENTIFIED | Chromatic dispersion |
| UNIDENTIFIED | OTuk-SM backward incoming alignment error |
| UNIDENTIFIED | Resource allocation failed |
| UNIDENTIFIED | Working LSP lock report |
| UNIDENTIFIED | Protect LSP lock report |
| UNIDENTIFIED | Satellite panel battery failure B |

A.5.8 GateWay/CORBA Mapping—ONS 15530

The following table lists the GateWay/CORBA mapping for the ONS 15530.

Table A-24 GateWay/CORBA Mapping for the ONS 15530

| TMF Mapping | NE Native Probable Cause |
|---------------------------|--|
| FAN Alarms | |
| EQPT | Two or more fans failed |
| EQPT | One fan failed |
| CPU Alarms | |
| UNIDENTIFIED | Unknown alarm detected |
| EQPT | SRC diag failure |
| EQPT | PCI diag failure |
| EQPT | PCMCIA diag failure |
| EQPT | Cannot access multiple line card |
| EQPT | IDPROM/backplane slot mismatch |
| EQPT | Cannot access backplane IDPROM |
| EQPT | Inconsistent redun states |
| EQPT | Read invalid SRC |
| EQPT | Unprotected; peer missing |
| EQPT | Unprotected; peer not responding |
| EQPT | Standby with lower capabilities |
| TSP Alarms | |
| EQPT | Access to TSP card failed |
| EQPT | Access to IDPROM failed |
| TX_FAIL | Line laser failure detected |
| TX_DEGRADE | Trunk laser degrade detected |
| UNIDENTIFIED | Trunk laser lambda deviation |
| UNIDENTIFIED | Wavelength mismatch error |
| MDSUBCARD Alarms | |
| EQPT | Access to IDPROM failed |
| Client Port Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| LOF | SONET loss of frame event |
| UNIDENTIFIED | SONET severely errored frame |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by open fibre control |

Table A-24 GateWay/CORBA Mapping for the ONS 15530 (continued)

| TMF Mapping | NE Native Probable Cause |
|------------------------------------|--|
| Wave Port Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| LOF | SONET loss of frame event |
| UNIDENTIFIED | SONET severely errored frame |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by laser safety control |
| UNIDENTIFIED | Link down |
| Chassis Alarm | |
| EQPT | Chassis fan tray missing |
| ENV | Chassis temp > critical limit |
| ENV | Chassis temp > major limit |
| ENV | Chassis temp > minor limit |
| ENV | Chassis temp less than -5 C |
| ENV | Chassis power supply 0 missing |
| ENV | Chassis power supply 1 missing |
| Power Supply Alarms | |
| EQPT | Power supply unit failed |
| Wave OSC Alarms | |
| UNIDENTIFIED | Loss of lock event |
| OSC_LOS | Loss of signal event |
| Wave Ethernet Phy Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by laser safety control |
| Ten Gig Ethernet Phy Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by laser safety control |
| ESCON Port Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |

Table A-24 GateWay/CORBA Mapping for the ONS 15530 (continued)

| TMF Mapping | NE Native Probable Cause |
|-----------------------------------|---|
| UNIDENTIFIED | Loss of sync event |
| UNIDENTIFIED | Laser disabled event |
| UNIDENTIFIED | Local failure, laser disabled |
| ESCON SFP Alarms | |
| TX_FAIL | Transmit laser failed |
| 10G Card Alarms | |
| EQPT | Access to 10G card failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| EQPT | 10G internal loopback failed |
| EQPT | 10G internal loopback through PSC failed |
| TX_FAIL | Laser failure detected |
| UNIDENTIFIED | Laser wavelength deviation |
| ESCON Card Alarms | |
| EQPT | Access to ESCON card failed |
| EQPT | Access to IDPROM failed |
| EQPT | ESCON card internal loopback failed |
| EQPT | ESCON card internal loopback through PSC failed |
| OSC MB Alarms | |
| EQPT | Access to card failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| OSC Subcard Alarms | |
| EQPT | Access to card failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Ethernet DCC loopback from OSCMB failed |
| TX_FAIL | Laser failure detected |
| UNIDENTIFIED | Laser wavelength deviation |
| VOA and PEQ SubCard Alarms | |
| EQPT | Access to card failed |
| EQPT | Access to IDPROM failed |
| IF-THRESHOLD Alarms | |
| UNIDENTIFIED | CVRD failure threshold exceeded |
| UNIDENTIFIED | CVRD degrade threshold exceeded |
| UNIDENTIFIED | CDL HEC failure threshold exceeded |
| UNIDENTIFIED | CDL HEC degrade threshold exceeded |
| UNIDENTIFIED | SONET/SDH CV-S failure threshold exceeded |

Table A-24 GateWay/CORBA Mapping for the ONS 15530 (continued)

| TMF Mapping | NE Native Probable Cause |
|---------------------------|--|
| UNIDENTIFIED | SONET/SDH CV-S degrade threshold exceeded |
| UNIDENTIFIED | CDL header CRC failure threshold exceeded |
| UNIDENTIFIED | CDL header CRC degrade threshold exceeded |
| UNIDENTIFIED | ESCON encapsulation packet errors failure threshold exceeded |
| UNIDENTIFIED | ESCON encapsulation packet errors degrade threshold exceeded |
| CDL Alarms | |
| UNIDENTIFIED | CDL hop-by-hop backward defect indication |
| UNIDENTIFIED | CDL hop-by-hop forward defect indication |
| UNIDENTIFIED | CDL end-by-end forward defect indication |
| UNIDENTIFIED | CDL end-by-end backward defect indication |
| Transceiver Alarms | |
| TX_FAIL | Laser failure |
| 2.5G Card Alarms | |
| EQPT | Access to 2.5G card failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| EQPT | 2.5G internal loopback failed |
| EQPT | 2.5G internal loopback through PSC failed |
| TX_FAIL | Laser failure detected |
| UNIDENTIFIED | Laser wavelength deviation |
| FCGE Card Alarms | |
| EQPT | Access to card failed |
| EQPT | Access to IDPROM failed |
| EQPT | Card internal loopback failed |
| EQPT | Card internal loopback through PSC failed |

A.5.9 GateWay/CORBA Mapping—ONS 15540

The following table lists the GateWay/CORBA mapping for the ONS 15540.

Table A-25 GateWay/CORBA Mapping for the ONS 15540

| TMF Mapping | NE Native Probable Cause |
|-----------------------|---------------------------------|
| Chassis Alarms | |
| EQPT | Chassis fan tray missing |
| ENV | Chassis temp > critical limit |
| ENV | Chassis temp > major limit |
| ENV | Chassis temp > minor limit |

Table A-25 GateWay/CORBA Mapping for the ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|-----------------------|---------------------------------------|
| ENV | Chassis temp less than -15 C |
| ENV | Chassis power supply A failed |
| ENV | Chassis power supply B failed |
| FAN Alarms | |
| EQPT | Two or more fans failed |
| EQPT | One fan failed |
| CPU Alarms | |
| UNIDENTIFIED | Unknown alarm detected |
| EQPT | SRC diag failure |
| EQPT | PCI diag failure |
| EQPT | PCMCIA diag failure |
| EQPT | Cannot access multiple line card |
| EQPT | IDPROM/backplane slot mismatch |
| EQPT | Cannot access backplane IDPROM |
| EQPT | Inconsistent redun states |
| EQPT | Read invalid SRC |
| EQPT | Unprotected; peer missing |
| EQPT | Unprotected; peer not responding |
| EQPT | Standby with lower capabilities |
| LCMB Alarms | |
| EQPT | Access to LRC failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Waveport [0...3] opt switch failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| MDMBOSC Alarms | |
| EQPT | Access to LRC failed |
| EQPT | Access to IDPROM failed |
| EQPT | OSC hardware failure detected |
| TX_FAIL | Trunk laser failure detected |
| UNIDENTIFIED | Trunk laser lambda deviation |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| MDMB Alarms | |
| EQPT | Access to LRC failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| TSP1 Alarms | |

Table A-25 GateWay/CORBA Mapping for the ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|----------------------------|---|
| EQPT | Access to TSP card failed |
| EQPT | Access to IDPROM failed |
| TX_FAIL | Line laser failure detected |
| TX_FAIL | Trunk laser failure detected |
| UNIDENTIFIED | Trunk laser lambda deviation |
| UNIDENTIFIED | Wavelength mismatch error |
| MD Subcard Alarms | |
| EQPT | Access to IDPROM failed |
| Client Port Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| LOF | SONET loss of frame event |
| UNIDENTIFIED | SONET severely errored frame |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by open fibre control |
| Wave Port Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| LOF | SONET loss of frame event |
| UNIDENTIFIED | SONET severely errored frame |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by laser safety control |
| UNIDENTIFIED | Link down |
| IF-THRESHOLD Alarms | |
| UNIDENTIFIED | CVRD failure threshold exceeded |
| UNIDENTIFIED | CVRD degrade threshold exceeded |
| UNIDENTIFIED | HEC failure threshold exceeded |
| UNIDENTIFIED | HEC degrade threshold exceeded |
| UNIDENTIFIED | SONET/SDH CV-S failure threshold exceeded |
| UNIDENTIFIED | SONET/SDH CV-S degrade threshold exceeded |
| CDL Alarms | |
| UNIDENTIFIED | CDL hop-by-hop backward defect indication |
| UNIDENTIFIED | CDL hop-by-hop forward defect indication |
| UNIDENTIFIED | CDL end-by-end forward defect indication |

Table A-25 GateWay/CORBA Mapping for the ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|------------------------------------|---|
| UNIDENTIFIED | CDL end-by-end backward defect indication |
| Wave Ethernet Phy Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event |
| UNIDENTIFIED | Loss of sync event |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Laser shut down by laser safety control |
| Ten Gig Ethernet Phy Alarms | |
| UNIDENTIFIED | Loss of lock event |
| LOS | Loss of signal event in Cisco OPT-MON-MIB |
| UNIDENTIFIED | Loss of sync event |
| UNIDENTIFIED | Laser shut down by forward laser control |
| UNIDENTIFIED | Trunk laser shut down by laser safety control |
| 10G Card Alarms | |
| EQPT | Access to card failed |
| EQPT | Access to IDPROM failed |
| EQPT | 10G internal loopback failed |
| TX_FAIL | Line laser failed |
| TX_FAIL | Trunk laser failure |
| UNIDENTIFIED | Trunk laser wavelength deviation |
| LOF | GFP loss of frame delineation |
| UNIDENTIFIED | Transport layer failure |
| UNIDENTIFIED | Encapsulation mismatch path |
| 10G MB Alarms | |
| EQPT | Access to LRC failed |
| EQPT | Access to IDPROM failed |
| UNIDENTIFIED | Waveport [0...3] OPT switch failed |
| UNIDENTIFIED | Ethernet DCC loopback from PSC failed |
| Dummy TSP for 10GE Alarms | |
| EQPT | Access to subcard failed |
| EQPT | Access to IDPROM failed |
| TSP2 Alarms | |
| EQPT | Access to TSP2 card failed |
| EQPT | Access to IDPROM failed |
| TX_FAIL | Line laser failure |
| TX_FAIL | Trunk laser failure detected |

Table A-25 GateWay/CORBA Mapping for the ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|---------------------------|------------------------------|
| UNIDENTIFIED | Trunk laser lambda deviation |
| Transceiver Alarms | |
| TX_FAIL | Laser failure |

A.5.10 Optical Monitoring Alarms—ONS 15530 and ONS 15540

The following table lists the optical monitoring alarms applicable to both the ONS 15530 and ONS 15540.

Table A-26 Optical Monitoring Alarms for the ONS 15530, ONS 15540

| TMF Mapping | NE Native Probable Cause |
|--|--|
| Power Optical Monitor Alarms | |
| UNIDENTIFIED | Rx optical power exceeds high alarm threshold |
| UNIDENTIFIED | Tx optical power exceeds high alarm threshold |
| UNIDENTIFIED | Rx optical power exceeds high warning threshold |
| UNIDENTIFIED | Tx optical power exceeds high warning threshold |
| UNIDENTIFIED | Rx optical power below low alarm threshold |
| UNIDENTIFIED | Tx optical power exceeds high alarm threshold |
| UNIDENTIFIED | Rx optical power below low warning threshold |
| UNIDENTIFIED | Tx optical power below low warning threshold |
| AC Power Optical Monitor Alarms | |
| UNIDENTIFIED | Rx optical AC power exceeds high alarm threshold |
| UNIDENTIFIED | Tx optical AC power exceeds high alarm threshold |
| UNIDENTIFIED | Rx optical AC power exceeds high warning threshold |
| UNIDENTIFIED | Tx optical AC power exceeds high warning threshold |
| UNIDENTIFIED | Rx optical AC power below low alarm threshold |
| UNIDENTIFIED | Tx optical AC power below low alarm threshold |
| UNIDENTIFIED | Rx optical AC power below low warning threshold |
| UNIDENTIFIED | Tx optical AC power below low warning threshold |
| Ambient Temp Power Optical Monitor Alarms | |
| UNIDENTIFIED | Rx ambient temp exceeds high alarm threshold |
| UNIDENTIFIED | Tx ambient temp exceeds high alarm threshold |
| UNIDENTIFIED | Rx ambient temp exceeds high warning threshold |
| UNIDENTIFIED | Tx ambient temp exceeds high warning threshold |
| UNIDENTIFIED | Rx ambient temp below low alarm threshold |
| UNIDENTIFIED | Tx ambient temp below low alarm threshold |
| UNIDENTIFIED | Rx ambient temp below low warning threshold |

Table A-26 Optical Monitoring Alarms for the ONS 15530, ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|--|---|
| UNIDENTIFIED | Tx ambient temp below low warning threshold |
| Laser Temp Power Optical Monitor Alarms | |
| UNIDENTIFIED | Rx laser temp exceeds high alarm threshold |
| UNIDENTIFIED | Tx laser temp exceeds high alarm threshold |
| UNIDENTIFIED | Rx laser temp exceeds high warning threshold |
| UNIDENTIFIED | Tx laser temp exceeds high warning threshold |
| UNIDENTIFIED | Rx laser temp below low alarm threshold |
| UNIDENTIFIED | Tx laser temp below low alarm threshold |
| UNIDENTIFIED | Rx laser temp below low warning threshold |
| UNIDENTIFIED | Tx laser temp below low warning threshold |
| Bias Temp Monitor Alarms | |
| UNIDENTIFIED | Rx bias current exceeds high alarm threshold |
| UNIDENTIFIED | Tx bias current exceeds high alarm threshold |
| UNIDENTIFIED | Rx bias current exceeds high warning threshold |
| UNIDENTIFIED | Tx bias current exceeds high warning threshold |
| UNIDENTIFIED | Rx bias current below low alarm threshold |
| UNIDENTIFIED | Tx bias current below low alarm threshold |
| UNIDENTIFIED | Rx bias current below low warning threshold |
| UNIDENTIFIED | Tx bias current below low warning threshold |
| Laser Peltier Current Monitor Alarms | |
| UNIDENTIFIED | Rx laser Peltier current exceeds high alarm threshold |
| UNIDENTIFIED | Tx laser Peltier current exceeds high alarm threshold |
| UNIDENTIFIED | Rx laser Peltier current exceeds high warning threshold |
| UNIDENTIFIED | Tx laser Peltier current exceeds high warning threshold |
| UNIDENTIFIED | Rx laser Peltier current below low alarm threshold |
| UNIDENTIFIED | Tx laser Peltier current below low alarm threshold |
| UNIDENTIFIED | Rx laser Peltier current below low warning threshold |
| UNIDENTIFIED | Tx laser Peltier current below low warning threshold |
| Transceiver Voltage Monitor Alarms | |
| UNIDENTIFIED | Rx transceiver voltage exceeds high alarm threshold |
| UNIDENTIFIED | Tx transceiver voltage exceeds high alarm threshold |
| UNIDENTIFIED | Rx transceiver voltage exceeds high warning threshold |
| UNIDENTIFIED | Tx transceiver voltage exceeds high warning threshold |
| UNIDENTIFIED | Rx transceiver voltage below low alarm threshold |
| UNIDENTIFIED | Tx transceiver voltage below low alarm threshold |

Table A-26 Optical Monitoring Alarms for the ONS 15530, ONS 15540 (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Rx transceiver voltage below low warning threshold |
| UNIDENTIFIED | Tx transceiver voltage below low warning threshold |

A.5.11 GateWay/CORBA Mapping—ONS 15600 SONET

The following table lists the GateWay/CORBA mapping for the ONS 15600 SONET.

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| EQPT | Alarms/events suppressed for this object |
| UNIDENTIFIED | Audit log 100 percent full |
| UNIDENTIFIED | Audit log 80 percent full |
| UNIDENTIFIED | BLSR out of sync |
| UNIDENTIFIED | BLSR multinode table update completed |
| UNIDENTIFIED | TSC switched to alternate Ethernet port |
| ENV | Failure detected external to the NE |
| DCC_FAILURE | DCC channel loss |
| DCC_FAILURE | SDCC termination failure |
| AIS | Alarm indication signal |
| AIS | Alarm indication signal—line |
| AIS | Alarm indication signal—path |
| FOP_APS | Byte failure |
| FOP_APS | Protection switching channel match failure |
| FOP_APS | Automatic protection switch mode mismatch |
| FOP_APS | Connection loss |
| FOP_APS | Default K byte |
| FOP_APS | Far-end protection line failure |
| FOP_APS | APS channel—far-end protection line signal degrade |
| FOP_APS | Improper APS code |
| FOP_APS | Inconsistent APS code |
| FOP_APS | Node ID mismatch |
| UNIDENTIFIED | STS concatenation error |
| LOF | Loss of frame |
| LOP | Loss of pointer—path |
| LOS | Loss of signal |
| RAI | Remote failure indication—line |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| RAI | Remote failure indication—path |
| BER_SD | BER threshold exceeded for signal degrade—line |
| BER_SD | BER threshold exceeded for signal degrade—path |
| BER_SD | Far-end BER threshold passed for signal degrade—ring |
| BER_SD | Far-end BER threshold passed for signal degrade—span |
| BER_SF | BER threshold exceeded for signal failure—line |
| BER_SF | BER threshold exceeded for signal failure—path |
| BER_SF | Far-end BER threshold passed for signal failure—ring |
| BER_SF | Far-end BER threshold passed for signal failure—span |
| UNIDENTIFIED | Payload defect indication—path |
| UNEQ | Unequipped—path |
| UNIDENTIFIED | Don't use for synchronization |
| UNIDENTIFIED | Failed to receive synchronization status message |
| UNIDENTIFIED | Synchronization status messages are disabled on this interface |
| UNIDENTIFIED | Primary reference source—stratum 1 traceable |
| UNIDENTIFIED | Reserved for network synchronization use |
| UNIDENTIFIED | SONET minimum clock traceable |
| UNIDENTIFIED | Stratum 2 traceable |
| UNIDENTIFIED | Stratum 3 traceable |
| UNIDENTIFIED | Stratum 3E traceable |
| UNIDENTIFIED | Stratum 4 traceable |
| UNIDENTIFIED | Synchronized—traceability unknown |
| UNIDENTIFIED | Transit node clock traceable |
| UNIDENTIFIED | Fifth synchronization reference failure |
| UNIDENTIFIED | Fourth synchronization reference failure |
| UNIDENTIFIED | Synchronization reference frequency out of bounds |
| UNIDENTIFIED | Primary synchronization reference failure |
| UNIDENTIFIED | Secondary synchronization reference failure |
| UNIDENTIFIED | Sixth synchronization reference failure |
| UNIDENTIFIED | Third synchronization reference failure |
| TIM | STS path trace identifier mismatch |
| ENV | NE power failure at connector A |
| ENV | NE power failure at connector B |
| EQPT | Power fuse failure |
| UNIDENTIFIED | Free running synchronization mode |
| UNIDENTIFIED | Stratum 3E fast start synchronization mode |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | Holdover synchronization mode |
| UNIDENTIFIED | Autonomous messages inhibited |
| UNIDENTIFIED | Autonomous PM report message inhibited |
| UNIDENTIFIED | Mismatch of equipment and attributes |
| UNIDENTIFIED | Ring topology is under construction |
| ENV | Software fault—data integrity fault |
| ENV | Airflow failure |
| EQPT | Equipment fails to boot |
| UNIDENTIFIED | Connection ID mismatch on CXC 0 |
| UNIDENTIFIED | Connection ID mismatch on CXC 1 |
| EQPT | Clock module failure |
| EQPT | Control bus failure—I/O—TSC A |
| EQPT | Control bus failure—I/O—TSC B |
| EQPT | Clock bus failure—TSC A |
| EQPT | Clock bus failure—TSC B |
| EQPT | Control communication equipment failure |
| EQPT | Primary nonvolatile backup memory failure |
| EQPT | Manufacturing data memory (EEPROM) failure |
| EQPT | Payload bus failure—matrix A |
| EQPT | Payload bus failure—matrix B |
| UNIDENTIFIED | CXC operations suspended |
| EQPT | Equipment failure |
| EQPT | Diagnostics failure |
| EQPT | Equipment failure—high temperature |
| EQPT | Invalid MAC address |
| UNIDENTIFIED | Failure to switch to protection |
| UNIDENTIFIED | Failure to switch to protection—path |
| UNIDENTIFIED | Failure to switch to protection—ring |
| UNIDENTIFIED | Failure to switch to protection—span |
| EQPT | Fan failure |
| EQPT | Partial fan failure—speed degradation |
| EQPT | Partial fan failure—parts failure |
| EQPT | Clock module frequency mismatch |
| UNIDENTIFIED | OSPF hello fail |
| EQPT | Laser bias current high |
| EQPT | High laser temperature |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | Software download failed |
| UNIDENTIFIED | Different software version |
| EQPT | Synchronization equipment unavailable |
| EQPT | Unprotected synchronization equipment |
| EQPT | Unprotected matrix equipment |
| UNIDENTIFIED | System upgrade in progress |
| EQPT | Matrix equipment unavailable |
| UNIDENTIFIED | Loopback—cross connect |
| UNIDENTIFIED | Loopback facility |
| UNIDENTIFIED | Loopback payload |
| UNIDENTIFIED | Loopback |
| SECURITY_VIOLATION | Security—invalid login (see audit trail) |
| SECURITY_VIOLATION | Invalid login attempt threshold exceeded |
| UNIDENTIFIED | Normal condition |
| UNIDENTIFIED | Performance monitor threshold crossing alert |
| UNIDENTIFIED | Duplicate node ID |
| EQPT | Improper removal |
| UNIDENTIFIED | Both ends of fiber provisioned as east |
| UNIDENTIFIED | Far end of fiber is provisioned with different ring ID |
| UNIDENTIFIED | Protection switch |
| EQPT | Equipment power failure |
| EQPT | Equipment power failure at connector A |
| EQPT | Equipment power failure at connector B |
| EQPT | Equipment power failure at return connector A |
| EQPT | Equipment power failure at return connector B |
| UNIDENTIFIED | Automatic reset |
| UNIDENTIFIED | Automatic path-protection switch caused by AIS |
| UNIDENTIFIED | Automatic path-protection switch caused by LOP |
| UNIDENTIFIED | Automatic path-protection switch caused by PDI |
| UNIDENTIFIED | Automatic path-protection switch caused by SDBER |
| UNIDENTIFIED | Automatic path-protection switch caused by SFBER |
| UNIDENTIFIED | Automatic path-protection switch caused by UNEQ |
| UNIDENTIFIED | Cold restart |
| UNIDENTIFIED | Exercise ring |
| UNIDENTIFIED | Exercising ring successfully |
| UNIDENTIFIED | Far-end exercise ring |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Exercise request on ring failed |
| UNIDENTIFIED | Exercise span |
| UNIDENTIFIED | Exercising span successfully |
| UNIDENTIFIED | Far-end exercise span |
| UNIDENTIFIED | Exercise request on span failed |
| UNIDENTIFIED | Force switch request on facility/equipment |
| UNIDENTIFIED | Force switch request on ring |
| UNIDENTIFIED | Force switch request on span |
| UNIDENTIFIED | Far-end working facility forced to switch to protection unit—ring |
| UNIDENTIFIED | Far-end working facility forced to switch to protection unit—span |
| UNIDENTIFIED | Bidirectional full pass-through is active |
| UNIDENTIFIED | Unidirectional full pass-through is active |
| EQPT | Inhibit switch to protect request on equipment |
| EQPT | Inhibit switch to working request on equipment |
| UNIDENTIFIED | K bytes pass-through is active |
| UNIDENTIFIED | Far-end lockout of protection—all spans |
| UNIDENTIFIED | Far-end lockout of protection—ring |
| UNIDENTIFIED | Far-end lockout of working—ring |
| UNIDENTIFIED | Far-end lockout of working—span |
| UNIDENTIFIED | Far-end lockout of protection—span |
| UNIDENTIFIED | Lockout of protection |
| UNIDENTIFIED | Lockout of protection—ring |
| UNIDENTIFIED | Lockout of protection—span |
| UNIDENTIFIED | Lockout of working—ring |
| UNIDENTIFIED | Lockout of working—span |
| UNIDENTIFIED | Lockout switch request on facility/equipment |
| UNIDENTIFIED | Lockout switch request on ring |
| UNIDENTIFIED | Manual reset |
| UNIDENTIFIED | Far-end manual switch of working facility to protection unit—ring |
| UNIDENTIFIED | Far-end manual switch of working facility to protection unit—span |
| UNIDENTIFIED | Manual switch to fifth reference |
| UNIDENTIFIED | Manual switch to fourth reference |
| UNIDENTIFIED | Manual switch to internal clock |
| UNIDENTIFIED | Manual switch to primary reference |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Manual switch to second reference |
| UNIDENTIFIED | Manual switch to sixth reference |
| UNIDENTIFIED | Manual switch to third reference |
| UNIDENTIFIED | Manual switch request on facility/equipment |
| UNIDENTIFIED | Manual switch request on ring |
| UNIDENTIFIED | Manual switch request on span |
| UNIDENTIFIED | Powerfail restart |
| UNIDENTIFIED | Ring is segmented |
| UNIDENTIFIED | Ring switch is active on the east side |
| UNIDENTIFIED | Ring switch is active on the west side |
| UNIDENTIFIED | Span switch is active on the east side |
| UNIDENTIFIED | Span switch is active on the west side |
| UNIDENTIFIED | Ring is squelching traffic |
| UNIDENTIFIED | Squelching path |
| UNIDENTIFIED | Software download in progress |
| UNIDENTIFIED | Switch to fifth reference |
| UNIDENTIFIED | Switch to fourth reference |
| UNIDENTIFIED | Switch to primary reference |
| UNIDENTIFIED | Switch to second reference |
| UNIDENTIFIED | Switch to sixth reference |
| UNIDENTIFIED | Switch to third reference |
| ENV | System reboot |
| UNIDENTIFIED | Extra traffic preempted |
| UNIDENTIFIED | Switched back to working unit |
| UNIDENTIFIED | Switched to protection unit |
| UNIDENTIFIED | Warm restart |
| UNIDENTIFIED | Wait to restore |
| UNIDENTIFIED | Ring is in wait-to-restore state |
| UNIDENTIFIED | Span is in wait-to-restore state |
| UNIDENTIFIED | Bridge and roll has occurred |
| UNIDENTIFIED | Bridge and roll is pending a valid signal |
| UNIDENTIFIED | Admin logout of user |
| UNIDENTIFIED | Admin lockout of user |
| UNIDENTIFIED | Admin lockout clear |
| UNIDENTIFIED | Automatic logout of idle user |
| UNIDENTIFIED | Login of user |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| SECURITY_VIOLATION | Invalid login—locked out |
| SECURITY_VIOLATION | Invalid login—already logged on |
| SECURITY_VIOLATION | Invalid login—password |
| SECURITY_VIOLATION | Invalid login—username |
| UNIDENTIFIED | Logout of user |
| UNIDENTIFIED | User locked out |
| UNIDENTIFIED | Open I/O slot(s) |
| UNIDENTIFIED | Improper matrix equipment inserted |
| EQPT | Equipment fails to boot |
| UNIDENTIFIED | No description |
| UNIDENTIFIED | Firewall has been disabled |
| UNIDENTIFIED | Loss of clock from mate TSC |
| UNIDENTIFIED | Alarms suppressed for maintenance |
| UNIDENTIFIED | SNTP host failure |
| UNIDENTIFIED | Disable inactive user |
| UNIDENTIFIED | Disable inactive clear |
| UNIDENTIFIED | Suspend user |
| UNIDENTIFIED | Duplicate serial number detected on a pluggable entity |
| EQPT | Equipment problem on carrier or PIM |
| EQPT | Equipment problem on PIM or PPM |
| UNIDENTIFIED | Suspend user clear |
| UNIDENTIFIED | Forced switch to primary reference |
| UNIDENTIFIED | Forced switch to secondary reference |
| UNIDENTIFIED | Forced switch to third reference |
| UNIDENTIFIED | Forced switch to internal clock |
| PLM | GFP user payload mismatch |
| UNIDENTIFIED | GFP fibre channel distance extension mismatch |
| UNIDENTIFIED | GFP fibre channel distance extension buffer starvation |
| BER_SF | GFP client signal fail detected |
| LOF | GFP loss of frame delineation |
| UNIDENTIFIED | GFP extension header mismatch |
| UNIDENTIFIED | Carrier loss on the LAN |
| UNIDENTIFIED | Encapsulation type mismatch |
| UNIDENTIFIED | Transport layer failure |
| PLM | Payload label mismatch—path |
| DCC_FAILURE | Line DCC termination failure |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| UNIDENTIFIED | K byte channel failure |
| UNIDENTIFIED | BLSR software version mismatch |
| SECURITY_VIOLATION | Security intrusion attempt detected—see audit log |
| UNIDENTIFIED | IP address already in use within the same DCC area |
| UNIDENTIFIED | Node name already in use within the same DCC area |
| UNIDENTIFIED | Free memory on card near zero |
| UNIDENTIFIED | Free memory on card very low |
| ENV | NE power failure at connector |
| UNIDENTIFIED | Standby database out of sync |
| UNIDENTIFIED | Database backup failed |
| UNIDENTIFIED | Database restore failed |
| UNIDENTIFIED | ISIS adjacency failure |
| EQPT | Equipment high laser bias |
| EQPT | Equipment high Rx power |
| EQPT | Equipment high Tx power |
| EQPT | Equipment low laser bias |
| EQPT | Equipment low Rx power |
| EQPT | Equipment low Tx power |
| UNIDENTIFIED | Provisioning mismatch |
| UNIDENTIFIED | Illegal route addition to the network |
| UNIDENTIFIED | Session time limit expired |
| UNIDENTIFIED | User password change required |
| SECURITY_VIOLATION | User authentication rejected |
| UNIDENTIFIED | APS invalid mode |
| UNIDENTIFIED | Far-end manual switch back to working—span |
| UNIDENTIFIED | Far-end forced switch back to working—span |
| UNIDENTIFIED | Alarms suppressed by user command |
| UNIDENTIFIED | Ring is squelching STS traffic |
| UNIDENTIFIED | REPT^DBCHG messages inhibited |
| TIM | Regenerator section trace identifier mismatch |
| MS-AIS | AIS—multiplex section—alarm indication signal |
| RAI | RFI—multiplex section—remote failure/alarm indication |
| BER_SF | Multiplex section—excessive BER |
| BER_SD | Multiplex section—signal degrade |
| DCC_FAILURE | Multiplex section DCC termination failure |
| UNIDENTIFIED | G811—primary reference clock traceable |

Table A-27 GateWay/CORBA Mapping for the ONS 15600 SONET (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| UNIDENTIFIED | G812T—transit node clock traceable |
| UNIDENTIFIED | G812L—local node clock traceable |
| UNIDENTIFIED | G813—synchronous equipment timing source traceable |
| UNIDENTIFIED | MS-SPRing out of sync |
| AU-AIS | AIS—administration unit—alarm indication signal |
| LOP | LOP—administration unit—loss of pointer |
| BER_SF | High-order path—excessive BER |
| BER_SD | High-order path—signal degrade |
| PLM | SLMF—PLM high order—path label mismatch |
| TIM | TIM high order—trace identifier mismatch failure |
| RAI | RFI—high order—remote failure/alarm indication |
| UNEQ | SLMF—unequipped high order—path unequipped |
| UNIDENTIFIED | Automatic SNCP switch caused by AIS |
| UNIDENTIFIED | Automatic SNCP switch caused by LOP |
| UNIDENTIFIED | Automatic SNCP switch caused by UNEQ |
| UNIDENTIFIED | Automatic SNCP switch caused by SFBER |
| UNIDENTIFIED | Automatic SNCP switch caused by SDBER |
| UNIDENTIFIED | Failure to switch to protection—high-order path |
| UNIDENTIFIED | MSSP multinode table update completed |
| UNIDENTIFIED | Bipolar violation |
| UNIDENTIFIED | High-order path—payload defect indication |
| UNIDENTIFIED | MSSP software version mismatch |
| DCC_FAILURE | Regenerator section—DCC termination failure |
| EQPT | Battery failure |
| UNIDENTIFIED | Extreme high voltage |
| UNIDENTIFIED | Extreme low voltage |
| UNIDENTIFIED | High voltage |
| UNIDENTIFIED | Low voltage |
| UNIDENTIFIED | Voltage reading mismatch between SC cards |
| EQPT | Wavelength out of lock |
| EQPT | Automatic laser shutdown |
| UNIDENTIFIED | Ring is squelching high-order traffic |
| EQPT | Non-Cisco PPM inserted |
| EQPT | Unqualified PPM inserted |

A.5.12 GateWay/CORBA Mapping—ONS 15600 SDH

The following table lists the GateWay/CORBA mapping for the ONS 15600 SDH.

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| EQPT | Alarms/events suppressed for this object |
| UNIDENTIFIED | Audit log 100 percent full |
| UNIDENTIFIED | Audit log 80 percent full |
| UNIDENTIFIED | BLSR out of sync |
| UNIDENTIFIED | BLSR multinode table update completed |
| UNIDENTIFIED | TSC switched to alternate Ethernet port |
| ENV | Failure detected external to the NE |
| DCC_FAILURE | DCC channel loss |
| DCC_FAILURE | SDCC termination failure |
| AIS | Alarm indication signal |
| AIS | Alarm indication signal—line |
| AIS | Alarm indication signal—path |
| FOP_APS | Byte failure |
| FOP_APS | Protection switching channel match failure |
| FOP_APS | Automatic protection switch mode mismatch |
| FOP_APS | Connection loss |
| FOP_APS | Default K byte |
| FOP_APS | Far-end protection line failure |
| FOP_APS | APS channel—far-end protection line signal degrade |
| FOP_APS | Improper APS code |
| FOP_APS | Inconsistent APS code |
| FOP_APS | Node ID mismatch |
| UNIDENTIFIED | STS concatenation error |
| LOF | Loss of frame |
| LOP | Loss of pointer—path |
| LOS | Loss of signal |
| RAI | Remote failure indication—line |
| RAI | Remote failure indication—path |
| BER_SD | BER threshold exceeded for signal degrade—line |
| BER_SD | BER threshold exceeded for signal degrade—path |
| BER_SD | Far-end BER threshold passed for signal degrade—ring |
| BER_SD | Far-end BER threshold passed for signal degrade—span |
| BER_SF | BER threshold exceeded for signal failure—line |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| BER_SF | BER threshold exceeded for signal failure—path |
| BER_SF | Far-end BER threshold passed for signal failure—ring |
| BER_SF | Far-end BER threshold passed for signal failure—span |
| UNIDENTIFIED | Payload defect indication—path |
| UNEQ | Unequipped—path |
| UNIDENTIFIED | Don't use for synchronization |
| UNIDENTIFIED | Failed to receive synchronization status message |
| UNIDENTIFIED | Synchronization status messages are disabled on this interface |
| UNIDENTIFIED | Primary reference source—stratum 1 traceable |
| UNIDENTIFIED | Reserved for network synchronization use |
| UNIDENTIFIED | SONET minimum clock traceable |
| UNIDENTIFIED | Stratum 2 traceable |
| UNIDENTIFIED | Stratum 3 traceable |
| UNIDENTIFIED | Stratum 3E traceable |
| UNIDENTIFIED | Stratum 4 traceable |
| UNIDENTIFIED | Synchronized—traceability unknown |
| UNIDENTIFIED | Transit node clock traceable |
| UNIDENTIFIED | Fifth synchronization reference failure |
| UNIDENTIFIED | Fourth synchronization reference failure |
| UNIDENTIFIED | Synchronization reference frequency out of bounds |
| UNIDENTIFIED | Primary synchronization reference failure |
| UNIDENTIFIED | Secondary synchronization reference failure |
| UNIDENTIFIED | Sixth synchronization reference failure |
| UNIDENTIFIED | Third synchronization reference failure |
| TIM | STS path trace identifier mismatch |
| ENV | NE power failure at connector A |
| ENV | NE power failure at connector B |
| EQPT | Power fuse failure |
| UNIDENTIFIED | Free running synchronization mode |
| UNIDENTIFIED | Stratum 3E fast start synchronization mode |
| UNIDENTIFIED | Holdover synchronization mode |
| UNIDENTIFIED | Autonomous messages inhibited |
| UNIDENTIFIED | Autonomous PM report message inhibited |
| UNIDENTIFIED | Mismatch of equipment and attributes |
| UNIDENTIFIED | Ring topology is under construction |
| ENV | Software fault—data integrity fault |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|--|
| ENV | Airflow failure |
| EQPT | Equipment fails to boot |
| UNIDENTIFIED | Connection ID mismatch on CXC 0 |
| UNIDENTIFIED | Connection ID mismatch on CXC 1 |
| EQPT | Clock module failure |
| EQPT | Control bus failure—I/O—TSC A |
| EQPT | Control bus failure—I/O—TSC B |
| EQPT | Clock bus failure—TSC A |
| EQPT | Clock bus failure—TSC B |
| EQPT | Control communication equipment failure |
| EQPT | Primary nonvolatile backup memory failure |
| EQPT | Manufacturing data memory (EEPROM) failure |
| EQPT | Payload bus failure—matrix A |
| EQPT | Payload bus failure—matrix B |
| UNIDENTIFIED | CXC operations suspended |
| EQPT | Equipment failure |
| EQPT | Diagnostics failure |
| EQPT | Equipment failure—high temperature |
| EQPT | Invalid MAC address |
| UNIDENTIFIED | Failure to switch to protection |
| UNIDENTIFIED | Failure to switch to protection—path |
| UNIDENTIFIED | Failure to switch to protection—ring |
| UNIDENTIFIED | Failure to switch to protection—span |
| EQPT | Fan failure |
| EQPT | Partial fan failure—speed degradation |
| EQPT | Partial fan failure—parts failure |
| EQPT | Clock module frequency mismatch |
| UNIDENTIFIED | OSPF hello fail |
| EQPT | Laser bias current high |
| EQPT | High laser temperature |
| UNIDENTIFIED | Software download failed |
| UNIDENTIFIED | Different software version |
| EQPT | Synchronization equipment unavailable |
| EQPT | Unprotected synchronization equipment |
| EQPT | Unprotected matrix equipment |
| UNIDENTIFIED | System upgrade in progress |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| EQPT | Matrix equipment unavailable |
| UNIDENTIFIED | Loopback—cross connect |
| UNIDENTIFIED | Loopback facility |
| UNIDENTIFIED | Loopback payload |
| UNIDENTIFIED | Loopback |
| SECURITY_VIOLATION | Security—invalid login (see audit trail) |
| SECURITY_VIOLATION | Invalid login attempt threshold exceeded |
| UNIDENTIFIED | Normal condition |
| UNIDENTIFIED | Performance monitor threshold crossing alert |
| UNIDENTIFIED | Duplicate node ID |
| EQPT | Improper removal |
| UNIDENTIFIED | Both ends of fiber provisioned as east |
| UNIDENTIFIED | Far end of fiber is provisioned with different ring ID |
| UNIDENTIFIED | Protection switch |
| EQPT | Equipment power failure |
| EQPT | Equipment power failure at connector A |
| EQPT | Equipment power failure at connector B |
| EQPT | Equipment power failure at return connector A |
| EQPT | Equipment power failure at return connector B |
| UNIDENTIFIED | Automatic reset |
| UNIDENTIFIED | Automatic path-protection switch caused by AIS |
| UNIDENTIFIED | Automatic path-protection switch caused by LOP |
| UNIDENTIFIED | Automatic path-protection switch caused by PDI |
| UNIDENTIFIED | Automatic path-protection switch caused by SDBER |
| UNIDENTIFIED | Automatic path-protection switch caused by SFBER |
| UNIDENTIFIED | Automatic path-protection switch caused by UNEQ |
| UNIDENTIFIED | Cold restart |
| UNIDENTIFIED | Exercise ring |
| UNIDENTIFIED | Exercising ring successfully |
| UNIDENTIFIED | Far-end exercise ring |
| UNIDENTIFIED | Exercise request on ring failed |
| UNIDENTIFIED | Exercise span |
| UNIDENTIFIED | Exercising span successfully |
| UNIDENTIFIED | Far-end exercise span |
| UNIDENTIFIED | Exercise request on span failed |
| UNIDENTIFIED | Force switch request on facility/equipment |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------|---|
| UNIDENTIFIED | Force switch request on ring |
| UNIDENTIFIED | Force switch request on span |
| UNIDENTIFIED | Far-end working facility forced to switch to protection unit—ring |
| UNIDENTIFIED | Far-end working facility forced to switch to protection unit—span |
| UNIDENTIFIED | Bidirectional full pass-through is active |
| UNIDENTIFIED | Unidirectional full pass-through is active |
| EQPT | Inhibit switch to protect request on equipment |
| EQPT | Inhibit switch to working request on equipment |
| UNIDENTIFIED | K bytes pass-through is active |
| UNIDENTIFIED | Far-end lockout of protection—all spans |
| UNIDENTIFIED | Far-end lockout of protection—ring |
| UNIDENTIFIED | Far-end lockout of working—ring |
| UNIDENTIFIED | Far-end lockout of working—span |
| UNIDENTIFIED | Far-end lockout of protection—span |
| UNIDENTIFIED | Lockout of protection |
| UNIDENTIFIED | Lockout of protection—ring |
| UNIDENTIFIED | Lockout of protection—span |
| UNIDENTIFIED | Lockout of working—ring |
| UNIDENTIFIED | Lockout of working—span |
| UNIDENTIFIED | Lockout switch request on facility/equipment |
| UNIDENTIFIED | Lockout switch request on ring |
| UNIDENTIFIED | Manual reset |
| UNIDENTIFIED | Far-end manual switch of working facility to protection unit—ring |
| UNIDENTIFIED | Far-end manual switch of working facility to protection unit—span |
| UNIDENTIFIED | Manual switch to fifth reference |
| UNIDENTIFIED | Manual switch to fourth reference |
| UNIDENTIFIED | Manual switch to internal clock |
| UNIDENTIFIED | Manual switch to primary reference |
| UNIDENTIFIED | Manual switch to second reference |
| UNIDENTIFIED | Manual switch to sixth reference |
| UNIDENTIFIED | Manual switch to third reference |
| UNIDENTIFIED | Manual switch request on facility/equipment |
| UNIDENTIFIED | Manual switch request on ring |
| UNIDENTIFIED | Manual switch request on span |
| UNIDENTIFIED | Powerfail restart |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| UNIDENTIFIED | Ring is segmented |
| UNIDENTIFIED | Ring switch is active on the east side |
| UNIDENTIFIED | Ring switch is active on the west side |
| UNIDENTIFIED | Span switch is active on the east side |
| UNIDENTIFIED | Span switch is active on the west side |
| UNIDENTIFIED | Ring is squelching traffic |
| UNIDENTIFIED | Squelching path |
| UNIDENTIFIED | Software download in progress |
| UNIDENTIFIED | Switch to fifth reference |
| UNIDENTIFIED | Switch to fourth reference |
| UNIDENTIFIED | Switch to primary reference |
| UNIDENTIFIED | Switch to second reference |
| UNIDENTIFIED | Switch to sixth reference |
| UNIDENTIFIED | Switch to third reference |
| ENV | System reboot |
| UNIDENTIFIED | Extra traffic preempted |
| UNIDENTIFIED | Switched back to working unit |
| UNIDENTIFIED | Switched to protection unit |
| UNIDENTIFIED | Warm restart |
| UNIDENTIFIED | Wait to restore |
| UNIDENTIFIED | Ring is in wait-to-restore state |
| UNIDENTIFIED | Span is in wait-to-restore state |
| UNIDENTIFIED | Bridge and roll has occurred |
| UNIDENTIFIED | Bridge and roll is pending a valid signal |
| UNIDENTIFIED | Admin logout of user |
| UNIDENTIFIED | Admin lockout of user |
| UNIDENTIFIED | Admin lockout clear |
| UNIDENTIFIED | Automatic logout of idle user |
| UNIDENTIFIED | Login of user |
| SECURITY_VIOLATION | Invalid login—locked out |
| SECURITY_VIOLATION | Invalid login—already logged on |
| SECURITY_VIOLATION | Invalid login—password |
| SECURITY_VIOLATION | Invalid login—username |
| UNIDENTIFIED | Logout of user |
| UNIDENTIFIED | User locked out |
| UNIDENTIFIED | Open I/O slot(s) |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| UNIDENTIFIED | Improper matrix equipment inserted |
| EQPT | Equipment fails to boot |
| UNIDENTIFIED | No description |
| UNIDENTIFIED | Firewall has been disabled |
| UNIDENTIFIED | Loss of clock from mate TSC |
| UNIDENTIFIED | Alarms suppressed for maintenance |
| UNIDENTIFIED | SNTP host failure |
| UNIDENTIFIED | Disable inactive user |
| UNIDENTIFIED | Disable inactive clear |
| UNIDENTIFIED | Suspend user |
| UNIDENTIFIED | Duplicate serial number detected on a pluggable entity |
| EQPT | EQPT problem on carrier or PIM |
| EQPT | EQPT problem on PIM or PPM |
| UNIDENTIFIED | Suspend user clear |
| UNIDENTIFIED | Forced switch to primary reference |
| UNIDENTIFIED | Forced switch to secondary reference |
| UNIDENTIFIED | Forced switch to third reference |
| UNIDENTIFIED | Forced switch to internal clock |
| PLM | GFP user payload mismatch |
| UNIDENTIFIED | GFP fibre channel distance extension mismatch |
| UNIDENTIFIED | GFP fibre channel distance extension buffer starvation |
| BER_SF | GFP client signal fail detected |
| LOF | GFP loss of frame delineation |
| UNIDENTIFIED | GFP extension header mismatch |
| UNIDENTIFIED | Carrier loss on the LAN |
| UNIDENTIFIED | Encapsulation type mismatch |
| UNIDENTIFIED | Transport layer failure |
| PLM | Payload label mismatch—path |
| DCC_FAILURE | Line DCC termination failure |
| UNIDENTIFIED | K byte channel failure |
| UNIDENTIFIED | BLSR software version mismatch |
| SECURITY_VIOLATION | Security intrusion attempt detected—see audit log |
| UNIDENTIFIED | IP address already in use within the same DCC area |
| UNIDENTIFIED | Node name already in use within the same DCC area |
| UNIDENTIFIED | Free memory on card near zero |
| UNIDENTIFIED | Free memory on card very low |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|---|
| ENV | NE power failure at connector |
| UNIDENTIFIED | Standby database out of sync |
| UNIDENTIFIED | Database backup failed |
| UNIDENTIFIED | Database restore failed |
| UNIDENTIFIED | ISIS adjacency failure |
| EQPT | Equipment high laser bias |
| EQPT | Equipment high Rx power |
| EQPT | Equipment high Tx power |
| EQPT | Equipment low laser bias |
| EQPT | Equipment low Rx power |
| EQPT | Equipment low Tx power |
| UNIDENTIFIED | Provisioning mismatch |
| UNIDENTIFIED | Illegal route addition to the network |
| UNIDENTIFIED | Session time limit expired |
| UNIDENTIFIED | User password change required |
| SECURITY_VIOLATION | User authentication rejected |
| UNIDENTIFIED | APS invalid mode |
| UNIDENTIFIED | Far-end manual switch back to working—span |
| UNIDENTIFIED | Far-end forced switch back to working—span |
| UNIDENTIFIED | Alarms suppressed by user command |
| UNIDENTIFIED | Ring is squelching STS traffic |
| UNIDENTIFIED | REPT^DBCHG messages inhibited |
| TIM | Regenerator section trace identifier mismatch |
| MS-AIS | AIS—multiplex section—alarm indication signal |
| RAI | RFI—multiplex section—remote failure/alarm indication |
| BER_SF | Multiplex section—excessive BER |
| BER_SD | Multiplex section—signal degrade |
| DCC_FAILURE | Multiplex section DCC termination failure |
| UNIDENTIFIED | G811—primary reference clock traceable |
| UNIDENTIFIED | G812T—transit node clock traceable |
| UNIDENTIFIED | G812L—local node clock traceable |
| UNIDENTIFIED | G813—synchronous equipment timing source traceable |
| UNIDENTIFIED | MS-SPRing out of sync |
| AU-AIS | AIS—administration unit—alarm indication signal |
| LOP | LOP—administration unit—loss of pointer |
| BER_SF | High-order path—excessive BER |

Table A-28 GateWay/CORBA Mapping for the ONS 15600 SDH (continued)

| TMF Mapping | NE Native Probable Cause |
|--------------------|--|
| BER_SD | High-order path—signal degrade |
| PLM | SLMF—PLM high order—path label mismatch |
| TIM | TIM high order—trace identifier mismatch failure |
| RAI | RFI—high order—remote failure/alarm indication |
| UNEQ | SLMF—unequipped high order—path unequipped |
| UNIDENTIFIED | Automatic SNCP switch caused by AIS |
| UNIDENTIFIED | Automatic SNCP switch caused by LOP |
| UNIDENTIFIED | Automatic SNCP switch caused by UNEQ |
| UNIDENTIFIED | Automatic SNCP switch caused by SFBER |
| UNIDENTIFIED | Automatic SNCP switch caused by SDBER |
| UNIDENTIFIED | Failure to switch to protection—high-order path |
| UNIDENTIFIED | MSSP multinode table update completed |
| UNIDENTIFIED | Bipolar violation |
| UNIDENTIFIED | High-order path—payload defect indication |
| UNIDENTIFIED | MSSP software version mismatch |
| DCC_FAILURE | Regenerator section—DCC termination failure |
| EQPT | Battery failure |
| UNIDENTIFIED | Extreme high voltage |
| UNIDENTIFIED | Extreme low voltage |
| UNIDENTIFIED | High voltage |
| UNIDENTIFIED | Low voltage |
| UNIDENTIFIED | Voltage reading mismatch between SC cards |
| EQPT | Wavelength out of lock |
| EQPT | Automatic laser shutdown |
| UNIDENTIFIED | Ring is squelching high-order traffic |
| EQPT | Non-Cisco PPM inserted |
| EQPT | Unqualified PPM inserted |

