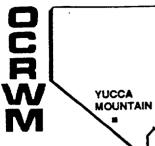
ENCLOSURE 1





YUCCA MOUNTAIN PROJECT

## **Q-LIST**

### **QUALITY ACTIVITIES LIST** (QAL)

### **PROJECT REQUIREMENTS LIST** (PRL)

# UNCONTROLLED



UNITED STATES DEPARTMENT OF ENERGY 9008200084 900815 PDR WASTE WM-11

FIL

YUCCA MOUNTAIN PROJECT

ş

YMP/90-55 YMP/90-56 YMP/90-57

#### YUCCA MOUNTAIN PROJECT

#### Q-LIST

QUALITY ACTIVITIES LIST (QAL)

PROJECT REQUIREMENTS LIST (PRL)

UNITED STATES DEPARTMENT OF ENERGY YUCCA MOUNTAIN PROJECT OFFICE

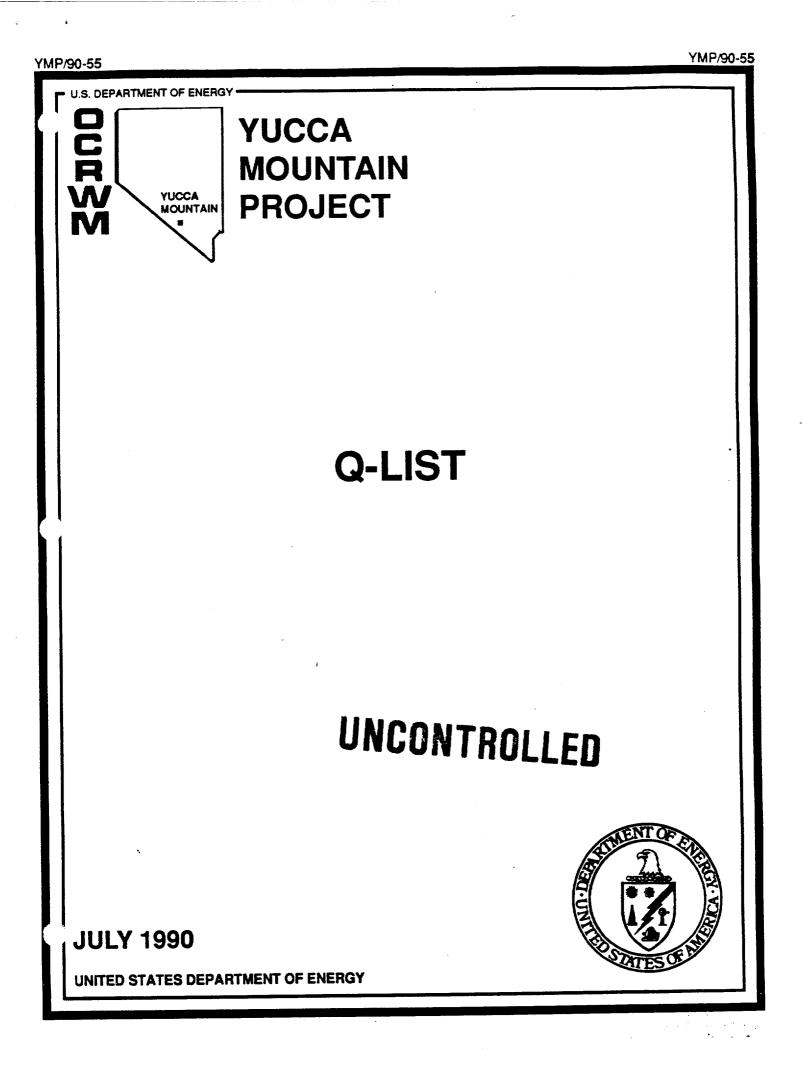
### TABLE OF CONTENTS

i,

		Revision	Date
YMP/90-55	QUALITY LIST (Q-LIST)	0	7/24/90
	<pre>o Section 1 - Items (Engineered) Important to Safety (IITS)</pre>		
	<ul> <li>Section 2 - Items (Engineered Barriers) Important to Waste Isolation (IITWI)</li> </ul>		
	o Appendix A - Natural Barriers Important to Waste Isolation		
YMP/90-56	Quality Activities List (QAL)	0	7/24/90
YMP/90-57	Project Requirements List (PRL)	0	7/24/90
	<ul> <li>Section 1 - Items <u>Not</u> Selected</li> <li>As Important To Safety Or As</li> <li>Important To Waste Isolation</li> </ul>		
	<ul> <li>Section 2 - All Activities <u>Not</u></li> <li>Selected As Quality Activities</li> <li>(May contain activities associate</li> <li>with IITS or IITWI)</li> </ul>	ied	

o Appendix A - Exempt Items and Activities





YUCCA MOUNTAIN PROJECT YMP/90-55 Rev. 0 7/24/90

#### YUCCA MOUNTAIN PROJECT

Q-LIST

UNITED STATES DEPARTMENT OF ENERGY YUCCA MOUNTAIN PROJECT OFFICE

Q-List Rev. 0, 7/24/90 Page 1 of 18

#### Q-LIST: QUALITY LIST REVISION 0

Approved by)completion of review and acceptance by the Quality Review Board:

124/50 Date

Quality Review Board Chairman

Revision History

Revision Date

Change

Initial issue of approved list.

Rev. 0 7/24/90

**TRALIFN** 

#### INTRODUCTION

The Assessment Team (AT) groups adopted the Physical Subsystems List from the Systems Requirement (SR) document as the principal basis for definition of engineered items important to waste isolation and important to safety. The list was modified, however, to eliminate natural barriers, which are not engineered items, and temporary Exploratory Shaft Facility (ESF) equipment that is used only for site characterization activities and not for repository construction and operation.

The identification of items in the SR Physical Subsystem List is not limited to "items" as defined in NUREG-1318 or the QARD and QAPD. Specifically, the list includes entries under Site that are not engineered items and entries under ESF that are not permanent repository items. With the exception of ESF items intended to be incorporated into a future repository (i.e., permanent items), engineered items in the ESF design shall be treated as tools used carry out the activities of site characterization. Control of tools will be covered under the QA controls imposed as a result of QA grading of the activities on the Quality Activities List and the Project Requirements List. Section 1.2.6.0 of the ESF Subsystem Design Requirements Document (SDRD) names four ESF permanent items for consideration for repository design:

o ESF Shaft Liners
o Underground Openings
o Ground Control
o Operational Seals

These items may be incorporated into the repository design, and if so, will be covered by the QA program as part of the repository.

The identification of natural barriers is based upon information in the Site Characterization Plan (SCP). The choice of hydrogeologic units for describing the natural barriers at the site parallels the usage in the SCP discussion of groundwater travel time and total system performance (see Tables 8.3.5.12-2 and 8.3.5.13-5). An important mechanism affecting water-borne radionuclide transport is advection. Under nominal conditions, advection considered independently of other transport and retardation process will likely result in natural barrier performance that ensures compliance with the applicable postclosure performance objectives (10 CFR 60.112, and 60.113[a][2]). Hydrogeologic units are specifically intended to describe properties that control liquid groundwater flow, which controls advective transport. Other stratigraphic definitions, such as thermal/mechanical and geochemical stratigraphy, are important for considering the effects of the repository on the geologic setting, and for assessing retardation and other transport mechanisms. The AT group chose to identify natural barriers in terms of hydrogeologic units.

The initial determination of Items Important to Safety does not utilize the detailed evaluations specified in Section 5.5 and Appendix 4 of AP-6.17Q. Instead, all initial assignments are made through the Direct Inclusion and Exemption provisions of AP-6.17Q (Sections 5.3 and 5.4). The procedure prescribes Direct Inclusion as a conservative course for determination of importance until more detailed evaluations are completed.

AP-6.17Q Section 5.6.3 states "Items that are recommended by the AT Group as IITWI shall be limited to the engineered and natural barrier components of the postclosure repository system." Temporary structures, systems, and components that are not part of the postclosure repository configuration are by this definition not IITWI."

Section 5.6 of AP-6.17Q prescribes the use of SCP Section 8.3.3, 8.3.4, and 8.3.5 for initial determination of IITWI. The AT also included SCP Section 8.3.2 for this evaluation.



.

Page 4 of 18

### Q-LIST SECTION 1

### ITEMS (ENGINEERED) IMPORTANT TO SAFETY (IITS)

REVISION 0

Q-L\_st Rev. 0

,

Page 5 of 18

Q-List Section 1 - Items (Engineered) Important to Safety (IITS)

	De al a a	
Item : Waste		
WBS : 1.2.		
Description	: SR 2.0 Includes the following subsystems:	• •
	Spent Fuel	2.1
	Waste Form	2.1.1
	Canister	2.1.2
	Container	2.1.3
	Packing	2.1.4
	Other	2.1.9
	Defense High-Level Waste	2.2
	Waste Form	2.2.1
	Canister	2.2.2
	Container	2.2.3
	Packing	2.2.4
	Other	2.2.9
	West Valley High-Level Waste	2.3
	Waste Form	2.3.1
	Canister	2.3.2
	Container	2.3.3
	Packing	2.3.4
	Other	2.3.9
Assignment Bases Info. H Evaluation P Revision Hist	: IITS-DI Ref : SR kg Ref : IITS-1 tory : Rev. 0, 7/24/90	
Item	: Surface Service and Utility Systems	
WBS	: 1.2.4.3	
Description	: SR 3.1, including the following subsystem	ms:
•	Onsite Service and Utility Systems	3.1.1
	Transportation System	3.1.1.1
	roads	3.1.1.1.1
	railroads	3.1.1.1.2
	Utilities	3.1.1.3
	power distribution system	3.1.1.3.1
	communication system	3.1.1.3.2
	lighting	3.1.1.3.3
	potable-water distribution system	3.1.1.3.5
	storm drainage system	3.1.1.3.7
	sanitary sewage collection system	3.1.1.3.10
	fire protection system	3.1.1.3.11
	fuel supply	3.1.1.3.12
	sanitary landfill	3.1.1.3.13
	Arichard Frinzere	

3.1.2

3.1.2.1 3.1.2.1.1

3.1.2.1.2

3.1.2.1.3 3.1.2.2

3.1.2.2.1

3.1.2.2.2 3.1.2.2.3

3.1.2.2.5

Item WBS

Q-List Section 1 - Items (Engineered) Important to Safety (Continued)

Offsite Service and Utility Systems Transportation System roads railroads bridges Utilities power supply communication system water supply drainage system : IITS-DI

Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1 Revision History : Rev. 0, 7/24/90

: Surface Facilities : 1.2.4.3 Description : SR 3.2, including the following subsystems: 3.2.1 Waste-Handling Facilities 3.2.1.1 Waste Handling Building 3.2.1.1.1 building and structures 3.2.1.1.2 cask-handling facilities hot cells 3.2.1.1.3 utilities 3.2.1.1.4 HVAC equipment 3.2.1.1.5 3.2.1.1.6 waste-handling and packaging equipment 3.2.1.1.7 support facilities site generated waste collection facilities 3.2.1.1.8 nuclear material control and accountability 3.2.1.1.9 system 3.2.1.1.10 lag storage 3.2.1.3.1 vehicle wash facility performance confirmation building 3.2.1.3.3

> 3.2.1.3.4 waste treatment building Support Facilities for Underground Operations 3.2.2 Ventilation Exhaust Shaft Filtration System 3.2.2.1 Primary Fan Installations for Underground 3.2.2.5 Ventilation Systems 3.2.2.8 Explosive Storage

Assignment	: IITS-DI
Bases Info. Ref	: SR
Evaluation Pkg Ref	: IITS-1
Revision History	: Rev. 0, 7/24/90



s.

Q-List Section 1 - Items (Engineered) Important to Safety (Continued)

Item	: Balance of Plant	
WBS	: 1.2.4.3	
Description	: SR 3.2.3 , including the following subsy	
	ire Alarm and Control System	3.2.3.2
	mergency and Backup Power Generation System	
	edical and Mine Rescue Facilities	3.2.3.9
М	onitoring and Operations Control Facilities	3.2.3.11
	ealth Physics Stations	3.2.3.12
	ecurity Facilities	3.2.3.15
	nstitutional Barriers	3.2.3.19
Assignment	: IITS-DI	
Bases Info. Ref		
Evaluation Pkg R	ef : TTTS-1	
Pavision History	: Rev. 0, 7/24/90	
Kevision miscory	· Nev. 07 1/24/00	
Item	: Waste Ramp	
WBS	: 1.2.4.3	
Description	: SR 3.3.1, including the following subsys	
	communication systems	3.3.1.1.1.60
	portal	3.3.1.1.2.10
	stations	3.3.1.1.2.20
	sump	3.3.1.1.2.30
	lining (includes operational seals)	3.3.1.1.2.40
	roadway	3.3.1.1.2.50
	utility lines	3.3.1.1.2.60
	excavation	3.3.1.1.2.80
Assignment	: IITS-DI	
Bases Info. Ref		
Evaluation Pkg R		
	r : Rev. 0, 7/24/90	
•		
	: Men-And-Materials Shaft	
Item	: 1.2.4.3	
WBS		- enheurstame.
Description	: SR 3.3.2.0.0.0 , including the following	3.3.2.1.1.10
	headframe	3.3.2.1.1.50
	communication system	3.3.2.1.2.10
,	collar	
	stations	3.3.2.1.2.20
	sump	3.3.2.1.2.30
	lining (includes operational seals)	3.3.2.1.2.40
	utility lines	3.3.2.1.2.60
	excavation	3.3.2.1.2.80
Assignment	: IITS-DI	
Bases Info. Ref		
Evaluation Pkg 1	Ref : IITS-1	
Revision History	y : Rev. 0, 7/24/90	

-

UNCONTROLLED

Q-List Rev. 0

Q-List Section 1 - Items (Engineered) Important to Safety (Continued)

Item	: Tuff Ramp	
WBS	: 1.2.4.3	
Description	: SR 3.3.3, including the following subs	ystems:
	ommunication systems	3.3.3.1.1.40
	ortal	3.3.3.1.2.10
-	tations	3.3.3.1.2.20
	ining (includes operational seals)	3.3.3.1.2.40
		3.3.3.1.2.60
	tility lines	
e	xcavation	3.3.3.1.2.80
• • • • • • •		
Assignment	: IITS-DI	
Bases Info. Ref	: SR	
Evaluation Pkg Re	f : IITS-1	
Revision History	: Rev. 0, 7/24/90	
Item	: Emplacement Area Exhaust Shaft	<u></u>
WBS	: 1.2.4.3	
Description	: SR 3.3.7, including the following subs	systems:
	oisthouse	3.3.7.1.1.20
		3.3.7.1.1.40
	communication system	3.3.7.1.2.10
-	ollar	
-	tation	3.3.7.1.2.20
	quin	3.3.7.1.2.30
	ining (includes operational seals)	3.3.7.1.2.40
	ixtures	3.3.7.1.2.50
7	ump discharge pipe columns	3.3.7.1.2.60
e	xcavation	3.3.7.1.2.80
- • •		
Assignment	: IITS-DI	
Bases Info. Ref		
Evaluation Pkg Re	ef : IITS-1	
Revision History	: Rev. 0, 7/24/90	
Item	: ES Modifications for Waste Emplacement	t Area Air Intake
WBS	: 1.2.4.3	
Description	: SR 3.3.8, including the following sub	systems: 3.3.8.1.1.10
	neadframe	
	noist shelter	3.3.8.1.1.20
	communication system	3.3.8.1.1.50
	collar	3.3.8.1.2.10
:	station	3.3.8.1.2.20
:	sump	3.3.8.1.2.30
	lining (includes operational seals)	3.3.8.1.2.40
• · · · · · · · · · · ·	TTMO DT	
Assignment	: IITS-DI	
Bases Info. Ref		
Evaluation Pkg R		
Revision History	: Rev. 0, 7/24/90	
-		

Page 9 of 18

•••••

UNCONTROLLEI

Q-List Rev. 0

Q-List Section 1 - Items (Engineered) Important to Safety (Continued)

MDC	: Underground Excavations (includes	
WBS	: Underground Excavations (includes operations : 1.2.4.3	ional seals)
Description		
-	Main Drift and Entry System	
	Tuff Main	3.4.1
	Service Main	3.4.1.1
	Ventilation Drifts	3.4.1.2
	Waste Main	3.4.1.3
	Emplacement Panel Openings	3.4.1.4
	Waste Emplacement Boreholes	3.4.2
	Borebole Shielding Cleaners and Glasses	3.4.3
	Borehole Shielding Closure and Closure Installer	3.4.3.2
	Borehole Shield Plug and Shield Plug Installer (Shield Plug only)	
	Borobolo Shield Diversed at it is an	3.4.3.3
	Borehole Shield Plug and Shield Plug Installer	
Assignment	(Installer only)	3.4.3.3
Bases Info. 1	: IITS-DI	
Powision Vie	kg Ref : IITS-1	
NEVISION HIS	tory : Rev. 0, 7/24/90	
Item	· Underground Complete the state	
VBS	: Underground Service and Utility Systems	
Description	: 1.2.4.3	
rescription	: SR 3.5, including the following subsystem.	
	Transportation System	3.5.1
	Power Distribution System	3.5.2
	Communication System	3.5.3
	Lighting System	3.5.4
	Ventilation System	3.5.5
	Development Area Ventilation	
		3.5.5.1
	Emplacement Area Ventilation	3.5.5.1
	Water Distribution System	3.5.5.2
	Water Distribution System Chilled Water	3.5.5.2 3.5.6
	Water Distribution System	3.5.5.2 3.5.6 3.5.6.1
	Water Distribution System Chilled Water Potable Water Industrial Water	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2
	Water Distribution System Chilled Water Potable Water Industrial Water	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10
	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1
·	Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12
Ľ	<pre>Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval positioning system for standoff and retrieval</pre>	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1 3.5.12.1
×	<pre>Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval positioning system for standoff and retrieval in short horizontal boreholes</pre>	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1
Ţ	<pre>Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval positioning system for standoff and retrieval in short horizontal boreholes positioning system for standoff and retrieval</pre>	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1 3.5.12.2 3.5.12.2
<b>N</b>	<pre>Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval positioning system for standoff and retrieval in short horizontal boreholes positioning system for standoff and retrieval in long horizontal boreholes</pre>	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1 3.5.12.2 3.5.12.2.1 3.5.12.2.1
	<pre>Water Distribution System Chilled Water Potable Water Industrial Water Water Collection and Disposal System Compressed Air Distribution System Fire Protection and Control System Fuel Handling, Storage, and Distribution System Waste Emplacement and Retrieval System Waste Transporter Positioning System for Standoff and Retrieval positioning system for standoff and retrieval in short horizontal boreholes positioning system for standoff and retrieval in long horizontal boreholes</pre>	3.5.5.2 3.5.6 3.5.6.1 3.5.6.2 3.5.6.3 3.5.7 3.5.8 3.5.9 3.5.10 3.5.12 3.5.12.1 3.5.12.2 3.5.12.2

Q-List Section 1 - Items (Engineered) Important to Safety (Continued)

Monitoring Systems Radiological Monitoring Nonradiological Monitoring Emergency Services Decontamination facility

3.5.17 3.5.17.1 3.5.17.2 3.5.18 3.5.20

Assignment : IITS-DI Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1 Revision History : Rev. 0, 7/24/90

Item: SealsWBS: 1.2.4.3Description: SR 3.6, including the following subsystems:<br/>Shaft and Ramp SealsShaft and Ramp Seals3.6.1.1Underground Excavation Seals3.6.1.2Exploratory Borehole Seals3.6.1.3Assignment: IITS-DI

Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1 Revision History : Rev. 0, 7/24/90

Item : Exploratory Shaft Facility WBS : 1.2.4.3 Description : SR 4.0, including the following subsystems: Exploratory Shafts 4.4 First Shaft 4.4.1 Lining(includes operational seals) 4.4.1.2 Second Shaft 4.4.2 Lining(includes operational seals) 4.4.2.2 Underground Excavations (includes operational seals and ground control) 4.5 Assignment : IITS-DI Bases Info. Ref : SR

Evaluation Pkg Ref : IITS-1 Revision History : Rev. 0, 7/24/90

÷

n.

Page 11 of 18

### Q-LIST SECTION 2

### ITEMS (ENGINEERED BARRIERS) IMPORTANT TO WASTE ISOLATION (IITWI)

REVISION 0



5

Page 12 of 18

UNCONTROLLED

Q-List Section 2 - Items (Engineered Barriers) Important to Waste Isolation

Item	: Waste Package	
WBS	: 1.2.2	
Description		s:
	Spent Fuel	2.1
	Waste Form	2.1.1
	Canister	2.1.2
	Container	2.1.3
	Packing	2.1.4
	Other	2.1.9
	Defense High-Level Waste	2.2
	Waste Form	2.2.1
	Canister	2.2.2
	Container	2.2.3
	Packing	2.2.4
	Other	2.2.9
	West Valley High-Level Waste	2.3
	Waste Form	2.3.1
	Canister	2.3.2
	Container	2.3.3
	Packing	2.3.4
	Other	2.3.9
Assignment Bases Info. H Evaluation P Revision Hist		
Item WBS	: Institutional Barriers : 1.2.4.3	
Description	: SR 3.2.3.19, (part of Repository (Balance	of Plant ))
Assignment		
Bases Info. 1	Ref : SR	
Evaluation Pl	tg Ref : IITWI-1	
Revision His	cory : Rev. 0, 7/24/90	
Item	: Waste Ramp	
WBS	: 1.2.4.3	
Description	: SR 3.3.1, including the following subsyst	
-	portal	3.3.1.1.2.10
	stations	3.3.1.1.2.20
	sump	3.3.1.1.2.30
	lining	3.3.1.1.2.40
	excavation	3.3.1.1.2.80
	·	

0-List Page 13 of 18 Rev. 0 Q-List Section 2 - Items (Engineered Barriers) Important to Waste Isolation (Continued) Assignment : IITWI-DI Bases Info. Ref : SR Evaluation Pkg Ref : IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Men-And-Materials Shaft WBS : 1.2.4.3 Description : SR 3.3.2.0.0.0 , including the following subsystems: collar 3.3.2.1.2.10 3.3.2.1.2.20 stations 3.3.2.1.2.30 sump 3.3.2.1.2.40 lining 3.3.2.1.2.80 excavation Assignment : IITWI-DI Bases Info. Ref : SR Evaluation Pkg Ref : IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Tuff Ramp WBS : 1.2.4.3 : SR 3.3.3, including the following subsystems: Description 3.3.3.1.2.10 portal 3.3.3.1.2.20 stations 3.3.3.1.2.40 lining 3.3.3.1.2.80 excavation : IITWI-DI Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Emplacement Area Exhaust Shaft WBS : 1.2.4.3 : SR 3.3.7, including the following subsystems: Description 3.3.7.1.2.10 collar 3.3.7.1.2.20 station 3.3.7.1.2.30 SUMD 3.3.7.1.2.40 lining 3.3.7.1.2.80 excavation Assignment : IITWI-DI : SR Bases Info. Ref Evaluation Pkg Ref : IITWI-1 : Rev. 0, 7/24/90 Revision History

Q-List Rev. 0		Page 14 of 18
Q-List Sectio	on 2 - Items (Engineered Barriers) Important to (Continued)	Waste Isolation
Item		
WBS	: ES Modifications for Waste Emplacement : 1.2.4.3	Area Air Intake
Description	: SR 3.3.8, including the following subsy	ist one .
	COILEL	3.3.8.1.2.10
	station	3.3.8.1.2.20
	sump lining	3.3.8.1.2.30
	TIUTUG	3.3.8.1.2.40
Assignment	: IITWI-DI	
Bases Info. Re		
Evaluation Pkg	Ref : IITWI-1	
Revision Histo	ry : Rev. 0, 7/24/90	
Item	: Underground Excavations	
WBS	: 1.2.4.3	
Description	: SR 3.4, including the following subsyste	ems:
1	Main Drift and Entry System Tuff Main	3.4.1
	Service Main	3.4.1.1
	Ventilation Drifts	3.4.1.2
	Waste Main	3.4.1.3
I	Emplacement Panel Openings	3.4.1.4 3.4.2
Ţ	Vaste Emplacement Boreholes	3.4.3
I	Borehole Shield Plug and Shield Plug Installer	J. T. J
	(Shield Plug only)	3.4.3.3
Assignment Bases Info. Ref	: IITWI-DI	-
Evaluation Pkg		
Revision Histor	ry : Rev. 0, 7/24/90	
	· · · · · · · · · · · · · · · · · · ·	
7.5		
Item WBS	: Seals	
Description	: 1.2.4.3	
•	: SR 3.6, including the following subsyste haft and Ramp Seals	
Ū	nderground Excavation Seals	3.6.1.1
E	xploratory Borehole Seals	3.6.1.2 3.6.1.3
Assignment		
Bases Info. Ref	: IITWI-DI : SR	
Evaluation Pkg	Ref : IITWI-1	
Revision Histor	y : Rev. 0, 7/24/90	
•.		
•		

2

Page 15 of 18

Q-List Rev. 0

Q-List Section 2 - Items (Engineered Barriers) Important to Waste Isolation (Continued)

Item	: Exploratory Shafts	
WBS	: 1.2.4.3	
Description	: SR 4.4, including the following subsy	stems.
	: Shaft	4.4.1
Lini	ing(includes operational seals)	4.4.1.2
Secor	nd Shaft	4.4.2
Lini	ng(includes operational seals)	4.4.2.2
Under	ground Excavations (includes operational	
	seals and ground control)	4.5
Assignment	: IITWI-DI	
Bases Info. Ref	: SR	
Evaluation Pkg Ref	: IITWI-1	
Revision History	: Rev. 0, 7/24/90	

.

5

,

Page 16 of 18

UNCONTROLLEE

Q-LIST APPENDIX A

NATURAL BARRIERS IMPORTANT TO WASTE ISOLATION

REVISION 0

.

.

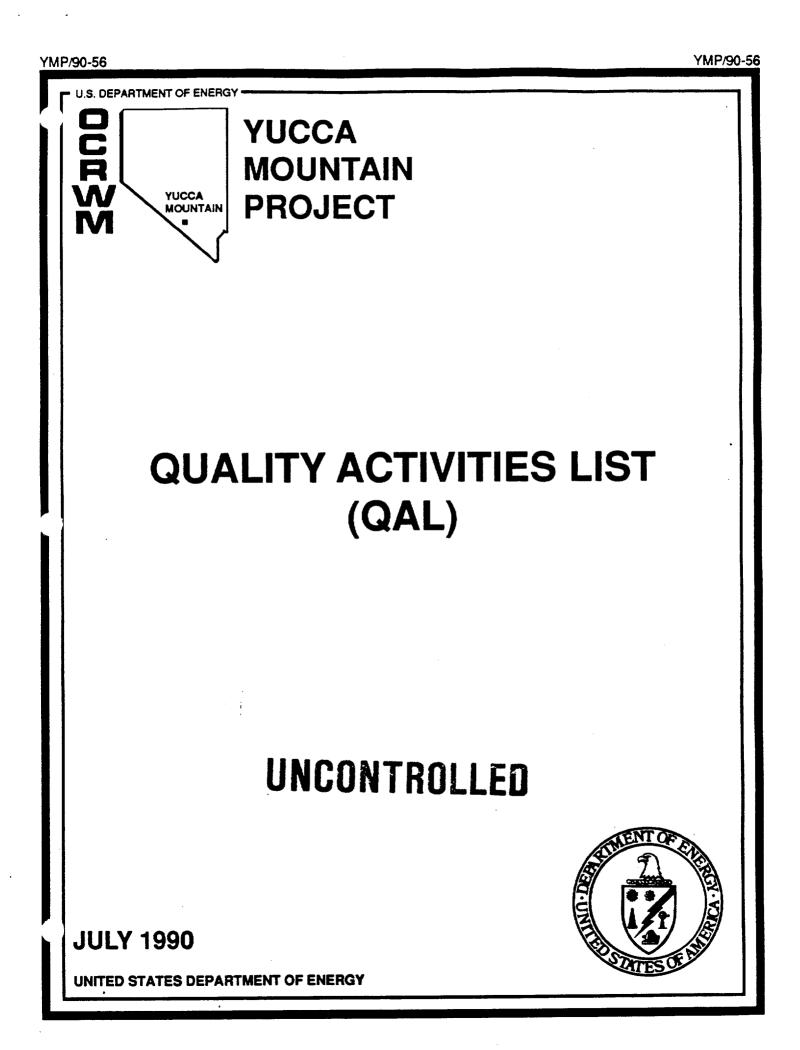
Page 17 of 18

Q-List Appendix A - Natural Barriers Important to Waste Isolation

: Alluvium
: 1.2
: Distributed alluvial and colluvial deposits, including
those in stream channels and on hill slopes. Lateral
boundaries are TBD.
: IITWI - Direct Inclusion
: SCP Table 3-22
: IITWI-1
: Rev. 0, 7/24/90
: Tiva Canyon welded hydrogeologic unit
: 1.2
: Ash-flow tuff exposed at the surface of Yucca Crest
overlying the Paintbrush nonwelded hydrogeologic unit.
Lateral boundaries are TBD.
: IITWI - Direct Inclusion
: SCP Table 3-22
: IITWI-1
: Rev. 0, 7/24/90
. Rev. 0, 1/24/50
: Paintbrush nonwelded hydrogeologic unit
: Paintbrush nonwelded hydrogeologic unit : 1.2
: 1.2
: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> <li>IITWI - Direct Inclusion</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> <li>IITWI - Direct Inclusion</li> <li>SCP Table 3-22</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> <li>IITWI - Direct Inclusion</li> <li>SCP Table 3-22</li> <li>IITWI-1</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> <li>IITWI - Direct Inclusion</li> <li>SCP Table 3-22</li> </ul>
<ul> <li>1.2</li> <li>Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD.</li> <li>IITWI - Direct Inclusion</li> <li>SCP Table 3-22</li> <li>IITWI-1</li> </ul>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff;</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff; proposed repository host rock. Lateral boundaries are</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff; proposed repository host rock. Lateral boundaries are TBD.</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff; proposed repository host rock. Lateral boundaries are TBD. : IITWI - Direct Inclusion</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff; proposed repository host rock. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 8.3.5.12-2</pre>
<pre>: 1.2 : Nonwelded tuff underlying the Tiva Canyon welded hydrogeologic unit and overlying the Topopah Springs welded hydrogeologic unit. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 3-22 : IITWI-1 : Rev. 0, 7/24/90 : Topopah Spring welded hydrogeologic unit : 1.2 : Densely to moderately welded devitrified ash-flow tuff; proposed repository host rock. Lateral boundaries are TBD. : IITWI - Direct Inclusion</pre>

Q-List Appendix A - Natural Barriers Important to Waste Isolation (Continued)

Bases Info. Ref Evaluation Pkg Ref	: Calico Hills nonwelded vitric hydrogeologic unit : 1.2 : Nonwelded vitric tuff. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 8.3.5.12-2 : IITWI-1 Data - 7/24/00
Revision History	: Rev. 0, //24/90
Barrier WBS Description Assignment Bases Info. Ref Evaluation Pkg Ref Revision History	: IITWI - Direct Inclusion : SCP Table 8.3.5.12-2 : IITWI-1
Barrier WBS Description Assignment Bases Info. Ref Evaluation Pkg Ref Revision History	<pre>: Crater Flat Tuff (undifferentiated) : 1.2 : Sequence of Prow Pass and Bullfrog welded and nonwelded units. Lateral boundaries are TBD. : IITWI - Direct Inclusion : SCP Table 8.3.5.12-2 : IITWI-1 : Rev. 0, 7/24/90</pre>
Barrier WBS Description Assignment Bases Info. Ref Evaluation Pkg Ref Revision History	



YUCCA MOUNTAIN PROJECT

.

.

YMP/90-56 Rev. 0 7/24/90

### YUCCA MOUNTAIN PROJECT

QUALITY ACTIVITIES LIST (QAL)

UNITED STATES DEPARTMENT OF ENERGY YUCCA MOUNTAIN PROJECT OFFICE QAL Rev. 0, 7/24/90

#### QUALITY ACTIVITIES LIST REVISION 0

Approved by completion of review and acceptance by the Quality Review Board:

Board Chairman Quality Review

7/24/50 Date

Revision History

Revision Date

Change

Rev. 0 7/24/90

Initial issue of approved list.

Page 2 of 17

QAL Rev. 0

#### INTRODUCTION

The evaluations in this report are based upon documentation in the Assessment Team (AT) Controlled List Rev. 2. The procedure prescribes Direct Inclusion as a conservative course for determination of importance until more detailed evaluations are completed.

Sections 5.2 and 5.6 of AP-6.17Q prescribe the use of the YMP WBS Dictionary as a checklist that provides broad coverage of Project activities. Further breakdowns to this listing were made where deemed appropriate by the AT group to address detailed plans submitted by participants for evaluation under AP-6.17Q. The format of the information in the current WBS Dictionary is oriented towards definition of activities rather than items. With a few exceptions in WBS 1.2.6, ESF, and WBS 1.2.4, Repository, there is no specific correlation between Q-List Items and WBS entries. To promote adequate consideration of the importance of items in a WBS based on activities, it is necessary to relate activities to items. For example, activities are assigned to the QAL on the basis of their association with a natural barrier important to waste isolation.

An activity that meets any one of the following criteria shall become a recommended quality activity and be placed on the Quality Activities List:

- a. The activity is a site characterization activity that potentially will provide data to be relied on in performance assessments of the waste isolation and containment capabilities of natural and engineered barriers.
  - 1. The activities related to this criterion provide data that will be used to characterize the natural barriers and that may be used for licensing performance assessments.
  - 2. The SCP and the semiannual progress reports document which data generated in an activity will be used in performance assessments. Only activities that provide primary information for licensing performance assessments must be included in the Quality Activities List. Scoping, prototypical, or preliminary activities that produce data that will not directly support the licensing performance assessments do not meet this criterion. When a site characterization activity is designated to be scoping, prototypical, or preliminary, it must be shown that there will be other follow-on activities that will be used to support the licensing performance assessment.
- b. The activity could have an adverse impact on the ability of a natural or engineered barrier to isolate waste.
  - 1. The activities addressed by this criterion include construction, operation, and site characterization activities that my adversely impact the ability of the natural barriers to isolate waste. Evaluations may indicate that many of these activities would not significantly affect the performance of natural barriers; however, they are to be included if the activities must be performed in a closely controlled fashion to preclude failures that would cause adverse impacts on the natural barrier.

Page 3 of 17

UNCONTROLLED

Rev. 0

- 2. In determining possible adverse impacts, the addition of water or materials, the alteration of properties (hydrologic, mechanical, thermal, or chemical), and the creation of pathways for water or radionuclide transport shall be considered. Any determination that an activity will not adversely impact natural barriers must be clearly conclusive and well documented. (Refer to the postclosure performance objectives in 10 CFR 60.112 and 10 CFR 60.113.)
- The activity is related to actual performance assessments. с.
  - 1. The activities addressed by this criterion relate to the postclosure performance assessments that will be performed to demonstrate that the numerical criteria of 10 CFR 60 will be met. Scoping, prototypical, or preliminary assessments that will not be presented or referenced in the above demonstration do not meet this criterion.

### OAL

QAL Rev. 0

÷

2

UNCONTROLLED

### QUALITY ACTIVITIES LIST (QAL)

QAL Rev. 0

 $\tilde{z}_{e}$ 

Quality Activities List (QAL)

Activity	: Management and Integration (AP-6.17Q Support and
WBS	non administrative ()A)
	: 1.2.1.1
SCP Reference	: N/A
Description	: Assessment Team activities under AP-6.17Q, QRB support
Acciemant	
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: AP-6.17Q, Rev. 0
Evaluation Pkg Ref	: QAL-1
Revision With any	: All - IITS, IITWI
Revision History	: Rev. 0, 7/24/90
Activity	Chapter -
WBS	: Systems Engineering : 1.2.1.2
SCP Reference	: 1.2.1.2 : N/A
Description	
Assignment	: all subordinate activities
	: QAL - Direct Inclusion : WBS Dictionary
Evaluation Pkg Ref	· MBS Dictionary
Related Q-List Item	· N/J
Avision Wishows	· N/R · Perr 0 7/34/00
Revision History	·
Activity	: Technical Data Base Management (except part of 1 0 1 0 0
Activity MBS	: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3
Activity MBS SCP Reference	: Technical Data Base Management (except part of 1.2.1.3.3 : N/A
Activity MBS SCP Reference	: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities ereest these
Activity MBS SCP Reference	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Particular</pre>
Activity NBS SCP Reference Description	<ul> <li>Technical Data Base Management (except part of 1.2.1.3.3</li> <li>1.2.1.3</li> <li>N/A</li> <li>Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendic 1</li> </ul>
Activity MBS SCP Reference Description Assignment	<ul> <li>Technical Data Base Management (except part of 1.2.1.3.3</li> <li>1.2.1.3</li> <li>N/A</li> <li>Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A</li> <li>QAL - Direct Inclusion</li> </ul>
Activity WBS SCP Reference Description Assignment ases Info. Ref	<ul> <li>Technical Data Base Management (except part of 1.2.1.3.3</li> <li>1.2.1.3</li> <li>N/A</li> <li>Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A</li> <li>QAL - Direct Inclusion</li> <li>WBS Dictionary</li> </ul>
Activity MBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : OAL-1</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : OAL-1</pre>
Activity MBS SCP Reference Description Activity Activity Description Activity	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A : all subordinate activities except these energification</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A : all subordinate activities except these energification</pre>
Activity MBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference escription	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A : all subordinate activities except those specifically exempted or analyzed as indicated in Project Performance : Performance Assessment (except part of 1.2.1.4.7)</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference escription	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Projec Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A : all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference escription Assignment ases Info. Ref	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A : all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A QAL - Direct Inclusion</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference escription Ssignment ases Info. Ref valuation Pkg Ref	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A QAL - Direct Inclusion WBS Dictionary OAL-1</pre>
Activity WBS SCP Reference Description Assignment ases Info. Ref valuation Pkg Ref elated Q-List Item evision History Ctivity BS CP Reference escription Assignment ases Info. Ref	<pre>: Technical Data Base Management (except part of 1.2.1.3.3 : 1.2.1.3 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Performance Assessment (except part of 1.2.1.4.7) : 1.2.1.4 : N/A all subordinate activities except those specifically exempted or analyzed as indicated in Project Requirements List Section 2 or Appendix A QAL - Direct Inclusion WBS Dictionary OAL-1</pre>

Page 6 of 17

QAL Rev. 0

Quality Activities List (QAL) (Continued)

Activity : Management & Integration (Non-administrative QA) : 1.2.2.1 WBS SCP Reference : N/A : Non-administrative QA activities. Description : QAL - Direct Inclusion Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : IITWI, IITS - Waste Package 2.0 Revision History : Rev. 0, 7/24/90 : Waste Package Environment Activity WBS : 1.2.2.2 : 8.3.4.2.4 SCP Reference : Includes all subordinate activities Description : QAL - Direct Inclusion Assignment : WBS Dictionary Bases Info. Ref Evaluation Pkg Ref : QAL-1 Related Q-List Item : IITWI - Waste Package 2.0 Revision History : Rev. 0, 7/24/90 : Waste Form and Materials Testing Activity : 1.2.2.3 WBS SCP Reference : N/A : Includes all subordinate activities Description : QAL - Direct Inclusion Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : IITWI - Waste Package 2.0 Revision History : Rev. 0, 7/24/90 : Design, Fabrication, and Prototype Testing Activity : 1.2.2.4 WBS SCP Reference : N/A : Includes all subordinate activities Description : OAL - Direct Inclusion Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : IITWI - Waste Package 2.0 Revision History : Rev. 0, 7/24/90 : Management & Integration (non-administrative QA) Activity : 1.2.3.1 WBS : N/A SCP Reference : Non-Administrative QA activities. Description : QAL - Direct Inclusion Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History UNCONTROLLE

UNCONTROLLE

QAL Rev. 0

Nativit:	: Geology (except part of 1.2.3.2.2.2.1, 1.2.3.2.6, and
Activity	1.2.3.2.8)
WBS	: 1.2.3.2
•••	: N/A
Description	: Includes all subordinate activities except those
-	specifically identified in PRL Section 2 - Activities Not
	Quality Related and PRL Appendix A - Exempt Items and
	Activities
3 i mmont	: QAL - Direct Inclusion
Assignment	-
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
- · · · •	
Activity	: Surface Characteristics
-	: 1.2.3.2.6
WBS	
SCP Reference	: 8.3.1.14
Description	: Topography and near surface geotechnical evaluations
	related to surface facility design
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Palatad Osligt Itam	: IITS - (Waste Handling Building(s))
Revision History	-110 (nable manually second $(0,7)$
Revision History	: Rev. 0, 1/24/30
Activity	: Preclosure Tectonics
Activity WBS	: 1.2.3.2.8
WBS SCP Reference	: 1.2.3.2.8 : 8.3.1.17
WBS SCP Reference	: 1.2.3.2.8
WBS SCP Reference Description	: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities
WBS SCP Reference Description Assignment	: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion
WBS SCP Reference Description Assignment Bases Info. Ref	: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those specifically identified in PRL Section 2 - Activities Not</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those specifically identified in PRL Section 2 - Activities Not Quality Related and PRL Appendix A - Exempt Items and</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those specifically identified in PRL Section 2 - Activities Not Quality Related and PRL Appendix A - Exempt Items and Activities</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those specifically identified in PRL Section 2 - Activities Not Quality Related and PRL Appendix A - Exempt Items and</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90 : Geohydrology : 1.2.3.3.1 : 8.3.1.2 : Includes all subordinate activities except those specifically identified in PRL Section 2 - Activities Not Quality Related and PRL Appendix A - Exempt Items and Activities : QAL - Direct Inclusion</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.2.8 : 8.3.1.17 : Includes all subordinate activities : QAL - Direct Inclusion : SCP Dictionary : QAL-1 : IITS : Rev. 0, 7/24/90</pre>

Page 8 of 17

UNCONTROLLED

QAL Rev. 0

,

¢

Activity	: Preclosure Hydrology (except 1.2.3.3.2.2)
WBS	: 1.2.3.3.2
SCP Reference	: 8.3.1.16
Description	: Includes subordinate activities except WBS 1.2.3.3.2.2,
-	Location of Adequate Water Supplies
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
Activity	: Location of Adequate Water Supplies
WBS	: 1.2.3.3.2.2
SCP Reference	: 8.3.1.16.2
	: Site activities dealing with identification of water
Description	
	supplies
Assignment	: OAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
-	
Activity	: Geochemistry
WBS	: 1.2.3.4
SCP Reference	: N/A
Description	: Includes all subordinate activities
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	
Evaluation rky Ket	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
Activity	: Drilling (except 1.2.3.5.2.1, 1.2.3.5.3.20, and 1.2.3.5.4
WBS	: 1.2.3.5
SCP Reference	: N/A
	: Includes all subordinate activities except those
Description	specifically identified in PRL Section 2 - Activities Not
	Quality Related and PRL Appendix A - Exempt Items and
•	
	Activities
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	
VEATOTON HIDRARD	

Page 9 of 17

QAL Rev. 0

A CONTRACT OF A		Confere Desilipies Desilibries
Activity		Surface Facilities Drillholes
WBS		1.2.3.5.3.20
SCP Reference		8.3.1.14.2.1
Description		Includes all subordinate activities.
Assignment	:	QAL - Direct Inclusion
Bases Info. Ref	:	WBS Dictionary
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item	:	IITS (Surface Facilities)
Revision History		
_		
Activity		Environmental Meteorological Studies
WBS		1.2.3.6.1
SCP Reference	:	8.3.1.12
Description		Includes all subordinate activities.
Assignment		QAL- Direct Inclusion
Bases Info. Ref	:	WBS Dictionary; YMP/CC-0005, Rev. 0 , 6/21/89; SCP
		Sections 8.3.1.5, 8.3.1.2
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item		
Revision History	:	Rev. 0, 7/24/90
-		
Activity		Climatology
WBS	•	1.2.3.6.2
		8.3.1.5
SCP Reference	:	0.3.1.3
SCP Reference Description	:	Includes all subordinate activities
SCP Reference Description	:	Includes all subordinate activities
SCP Reference Description Assignment Bases Info. Ref	: :	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary
SCP Reference Description Assignment Bases Info. Ref	: :	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	••••••	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	•	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	•	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity	•••••••••••••••••••••••••••••••••••••••	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	• • • • • • • • •	Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7 N/A
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7 N/A Includes all subordinate activities
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7 N/A Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7 N/A Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1
SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref		Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1 N/A Rev. 0, 7/24/90 Resource Potential 1.2.3.7 N/A Includes all subordinate activities QAL - Direct Inclusion WBS Dictionary QAL-1



UNCONTROLLE

QAL Rev. 0

÷

Activity	: Management and Integration (Technical)
WBS	: 1.2.4.1
SCP Reference	: N/A
Description	: Portion of WBS 1.2.4.1 scope dealing with the integrated design report, development of baselined requirements, selection of design basis data, and evaluation of design options and non-administative QA.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
	: IITS; IITWI - MGDS
Revision History	: Rev. 0, 7/24/90
Activity	: Design Basis
WBS	: 1.2.4.1.1
SCP Reference	: N/A
Description	: Assemble and review design basis information.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	; QAL-1
	: IITS, IITWI - Repository 3.1
Revision History	: Rev. 0, 7/24/90
Activity	: Development and Testing (except 1.2.4.2.1.3)
ACCIVICY	· Deletatone and thetend (thetelet
	: 1.2.4.2
WBS	: 1.2.4.2 : N/A
WBS SCP Reference	: 1.2.4.2 : N/A : Includes all subordinate activities except those
WBS	<ul> <li>: 1.2.4.2</li> <li>: N/A</li> <li>: Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje</li> </ul>
WBS SCP Reference	<ul> <li>: 1.2.4.2</li> <li>: N/A</li> <li>: Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje</li> </ul>
WBS SCP Reference Description	: 1.2.4.2 : N/A : Includes all subordinate activities except those
WBS SCP Reference Description Assignment	<ul> <li>: 1.2.4.2</li> <li>: N/A</li> <li>: Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A</li> </ul>
WBS SCP Reference Description Assignment Bases Info. Ref	<ul> <li>: 1.2.4.2</li> <li>: N/A</li> <li>: Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A</li> <li>: QAL - Direct Inclusion</li> <li>: WBS Dictionary</li> </ul>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<ul> <li>: 1.2.4.2</li> <li>: N/A</li> <li>: Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A</li> <li>: QAL - Direct Inclusion</li> <li>: WBS Dictionary</li> <li>: QAL-1</li> </ul>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90 : Facilities</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90 : Facilities : 1.2.4.3</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90 : Facilities : 1.2.4.3 : N/A</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90 : Facilities : 1.2.4.3 : N/A : Design and R&amp;D activities related to repository items.</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.4.2 : N/A : Includes all subordinate activities except those specifically exempted or analyzed as indicated in Proje Requirements List Section 2 or Appendix A : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - MGDS : Rev. 0, 7/24/90</pre>

Page 11 of 17

QAL Rev. 0

¢

Quality Activities List (QAL) (Continued)

Activity	: Operations/Maintenance
WBS	: 1.2.4.4
SCP Reference	: N/A
Description	: Includes all subordinate activities.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	: <u>Q</u> AL-1
Related Q-List Item	: IITS; IITWI - MGDS
Revision History	: Rev. 0, 7/24/90
7	: Decommissioning
Activity	: 1.2.4.5
WBS	
SCP Reference	: N/A : Design related activities. Includes subordinate
Description	
	activities
Assignment	: OAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	: IITS - Repository
Revision History	: Rev. 0, 7/24/90
Activity	: Sealing
WBS	: 1.2.4.6
SCP Reference	: 8.3.3.2.2.1
Description	: Includes all subordinate activities
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	
Related O-List Item	: IITWI - Seals 3.6
Revision History	
Kevision history	
Activity	: Licensing (except 1.2.5.2.2, 1.2.5.2.6, and 1.2.5.2.7)
WBS	: 1.2.5.2
SCP Reference	: N/A
Description	: Includes all subordinate activities except those
	specifically exempted or analyzed as indicated in Project
	Requirements List Section 2 or Appendix A
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Dolated O-list Them	: IITWI, IITS - MGDS
Revision History	

-

Page 12 of 17

QAL Rev. 0

Quality Activities List (QAL) (Continued)

	Nin Ouslike (Meteorelog)
	: Air Quality/Meteorology
	: 1.2.5.4.2
	: 8.3.1.12.2
	: Includes all subordinate activities.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary; YMP/CC-0005, Rev. 0, 8.3.1.12.2.1
	Meteorological Data Collection at the Yucca Mountain site
	SCP Sections 8.3.1.5 and 8.3.1.2
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	
	: Rev. 0, 7/24/90
Activity	: Archaeological Resources
	: 1.2.5.4.3
WBS	: N/A
SCP Reference	: Site surveys and impact mitigation activities
	: OAL - Direct Inclusion
Assignment	
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
Activity	: Radiological Studies (except Radiological Monitoring Plan
	activities)
WBS	: 1.2.5.4.5
SCP Reference	: N/A
Description	: All radiological monitoring activities except those
	controlled by the Radiological Monitoring Plan.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary; YMP/88-14, Rev. 0
Evaluation Pkg Ref	
Related Q-List Item	
	: Rev. 0, 7/24/90
Revision History	: RE4. 0, 1/24/30
Activity	: Radiological Studies (Radiological Monitoring Plan -
ACCIATCI	Airborne Radionuclide, Surface Water, and Groundwater
	Monitoring)
MBC	: 1.2.5.4.5
WBS	: N/A
SCP Reference	: Water monitoring (Sec. 4.3.5) and airborne radionuclide
Description	: water monitoring (Sec. 8.3.3) and allotte factorized
	monitoring (Section 4.3.4) activities in Radiological
	Monitoring Plan.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary; YMP/88-14, Rev. 0
Two luckies Dhe Def	• () BT.=1
Evaluation Pkg Ker	· Aun-r
Evaluation Pkg Ref Related O-List Item	
Related Q-List Item Revision History	

-6

Page 13 of 17

UNCONTROLLEE

Quality Activities List (QAL) (Continued)

Activity	: Soils
WBS	: 1.2.5.4.6
SCP Reference	: N/A
Description	: Field surveys and monitoring, support reclamation
	development.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
Activity	: Terrestrial Ecosystems
WBS	: 1.2.5.4.7
SCP Reference	: N/A
Description	: Field surveys and monitoring, support reclamation program
	development.
Assignment	: <u>OAL</u> - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
Activity	: Water Resources
WBS	: 1.2.5.4.8
SCP Reference	: N/A
Description	: Field surveys and monitoring
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
	Transportation Studios
Activity	: Transportation Studies
WBS	: 1.2.5.5.1
SCP Reference	: N/A
Description	: Includes all subordinate activities
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
,	

Quality Activities List (QAL) (Continued)

Activity	: Exploratory Shaft Management, Planning, and Technical
-	Assessment (Technical Assessment Activities)
WBS	: 1.2.6.1.1
SCP Reference	: N/A
Description	: Portion of WBS 1.2.6.1.1 scope dealing with technical
-	assessment activities.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: IITWI - ESF permanent items
Revision History	: Rev. 0, 7/24/90
-	
Activity	: Quality Assurance (Non-administrative QA)
WBS	: 1.2.6.1.2
SCP Reference	: N/A
Description	: N/A : Includes all non-administrative QA activities. : QAL - Direct Inclusion : WBS Dictionary
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: IITS, IITWI - ESF permanent items
Revision History	: Rev. 0, 7/24/90
Activity	: Site Preparation
WBS	: Site Preparation : 1.2.6.2
WBS SCP Reference	: Site Preparation : 1.2.6.2 : N/A
WBS SCP Reference Description	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities
WBS SCP Reference Description Assignment	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion
WBS SCP Reference Description Assignment Bases Info. Ref	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities : QAL - Direct Inclusion</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - Exploratory Shafts 4.4</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: Site Preparation : 1.2.6.2 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Surface Facilities : 1.2.6.3 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI, IITS - Exploratory Shafts 4.4</pre>

Quality Activities List (QAL) (Continued)

Activity	: First Shaft (except 1.2.6.4.2)
WBS	: 1.2.6.4
SCP Reference	: N/A
Description	: Includes all subordinate activities except ES-1 Hoist and
-	Headframe (1.2.6.4.2)
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Related O-List Item	: IITWI, IITS - First Shaft 4.4.1
Revision History	
Kevision miscory	
Activity	: Second Shaft (except 1.2.6.5.2)
WBS	: 1.2.6.5
SCP Reference	: N/A
Description	: Includes all subordinate activities except ES-2 Hoist and
Degettheton	Headframe (1.2.6.5.2)
Assimment	: OAL - Direct Inclusion
Assignment Bases Info. Ref	
Evaluation Pkg Ref	: QALTI
	: IITWI, IITS - Second Shaft 4.4.2
Revision History	: Rev. U, //24/90
Activity	· Subsurface Excavations
Activity	: Subsurface Excavations
WBS	: 1.2.6.6
WBS SCP Reference	: 1.2.6.6 : N/A
WBS SCP Reference Description	: 1.2.6.6 : N/A : Includes all subordinate activities
WBS SCP Reference Description Assignment	: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion
WBS SCP Reference Description Assignment Bases Info. Ref	: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : Underground Service Systems (except 1.2.6.7.2 and</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : Underground Service Systems (except 1.2.6.7.2 and 1.2.6.7.3)</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : Underground Service Systems (except 1.2.6.7.2 and 1.2.6.7.3) : 1.2.6.7</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : Underground Service Systems (except 1.2.6.7.2 and 1.2.6.7.3) : 1.2.6.7 : N/A</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : Underground Service Systems (except 1.2.6.7.2 and 1.2.6.7.3) : 1.2.6.7 : N/A : Includes all subordinate activities except ES-1 and ES-2</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90 : : Underground Service Systems (except 1.2.6.7.2 and 1.2.6.7.3) : 1.2.6.7 : N/A : Includes all subordinate activities except ES-1 and ES-2 Shaft Internals and Conveyances (1.2.6.7.2 and 1.2.6.7.3)</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.6.6 : N/A : Includes all subordinate activities : QAL - Direct Inclusion : WBS Dictionary : QAL-1 : IITWI - Underground Excavations 4.5 : Rev. 0, 7/24/90</pre>

#### Quality Activities List (QAL) (Continued)

Activity	: Integrated Data Systems
WBS	: 1.2.6.8.4
SCP Reference	: 8.3.1
Description	: Includes all subordinate activities
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Related Q-List Item	: IITWI
Revision History	: Rev. 0, 7/24/90
Datiniti	: Decommissioning
Activity	: 1.2.6.9
WBS SCP Reference	: N/A
	: Includes all subordinate activities.
Assignment Bases Info. Ref	: QAL - Direct Inclusion
Evaluation Pkg Ref	; QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
Activity	: Management & Integration (non-administrative QA)
WBS	: 1.2.7.1
SCP Reference	: N/A
Description	: Non-administrative QA activities.
Assignment	: QAL - Direct Inclusion
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
Activity	: New Facility Acquisition
WBS	: 1.2.7.3
SCP Reference	: N/A
Description	: Includes all subordinate activities.
Assignment	: OAL - Direct Inclusion
Bases Info. Ref	
	: WBS Dictionary
Evaluation Pkg Ref	: QAL-1
Evaluation Pkg Ref Related Q-List Item	: QAL-1 : N/A
Evaluation Pkg Ref	: QAL-1 : N/A

Page 17 of 17

QAL Rev. 0

Assignment

Bases Info. Ref

Evaluation Pkg Ref : QAL-1

Related Q-List Item : IITS, IITWI - MGDS Revision History : Rev. 0, 7/24/90

Quality Activities List (QAL) (Continued)

Activity WBS		Project Peer Review 1.2.9.1.3
SCP Reference		N/A
	:	Includes all subordinate activities.
Assignment	:	QAL - Direct Inclusion
Bases Info. Ref	:	QAPD, DOE/RW-0215, Rev. 2, Appendix A, Section 20.4.2, Peer Review; WBS Dictionary
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item	:	IITWI, IITS
Revision History	:	Rev. 0, 7/24/90
Activity		Quality Assurance (non-administrative QA)
WBS		1.2.9.3
SCP Reference		N/A
Description	:	Non-Administrative QA activities.

: QAL - Direct Inclusion

: WBS Dictionary

YMP/90-57

U.S. DEPARTMENT OF ENERGY =



# PROJECT REQUIREMENTS LIST (PRL)

# UNCONTROLLED



**JULY 1990** 

UNITED STATES DEPARTMENT OF ENERGY

### UNCONTROLLED

UNITED STATES DEPARTMENT OF ENERGY YUCCA MOUNTAIN PROJECT OFFICE

•

YMP/90-57 Rev. 0 7/24/90

YUCCA MOUNTAIN PROJECT PROJECT REQUIREMENTS LIST (PRL)

YUCCA MOUNTAIN PROJECT

.

-

PRL Rev. 0, 7/24/90 Page 1 of 26

#### PROJECT REQUIREMENTS LIST REVISION 0

Approved by completion of review and acceptance by the Quality Review Board: Brown  $\frac{7}{24}$   $\frac{7}{24}$   $\frac{7}{20}$  -

Revision History

Revision Date

Change

Rev. 0 7/24/90

Initial issue of approved list.

#### INTRODUCTION

The basis for not selecting and for exempting items and activities is described in the evaluations sections of the supporting materials. Many of the activities are related to engineered items important to safety, engineered items important to waste isolation, or activities on the quality activities list. They should be graded and controlled accordingly.

۰.

. .

Page 3 of 26

PROJECT REQUIREMENTS LIST SECTION 1

ITEMS NOT SELECTED AS ITEMS IMPORTANT TO SAFETY (IITS) OR AS ITEMS IMPORTANT TO WASTE ISOLATION (IITWI)

> Project Requirements List Section 1 - Items NOT Selected as Items Important to Safety (IITS) or as Items Important to Waste Isolation (IITWI)

To Be Determined - (A design configuration suitable for the analyses process in Exhibit 4 of AP-6.17Q has not been selected.)

Page 5 of 26

PRL Rev. 0

#### PROJECT REQUIREMENTS LIST

SECTION 2

ALL ACTIVITIES NOT SELECTED

AS QUALITY ACTIVITIES FOR THE QAL

(MAY CONTAIN ACTIVITIES ASSOCIATED WITH IITS OR IITWI)

...

Project Requirements List Section 2 -All Activities NOT Selected as Quality Activities for the QAL (May Contain Activities Associated With IITS or IITWI)

Activity	· Peferonco Information Dana (1)
WBS	: Reference Information Base (Administrative Tasks) : 1.2.1.3.3
SCP Reference	: N/A
Description	
•	: Administrative tasks related to RIB development (PCA 1.0 Task 1.2)
Assignment	: PRL Sec. 2
Bases Info. Ref	
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
-	
Activity	: Supporting Calculations for Postclosure Performance
	Analyses (Scoping studies)
WBS	: 1.2.1.4.7
SCP Reference	: N/A
Description	: Preliminary (scoping) analyses to support design
	activities (PCA 1.0, Task 1.1), support of other PA WBS
	elements (PCA 2.0, Task 2.1), and support resolution of
	Issue 1.3 (PCA 3.0, Task 3.1)
Assignment	: PRL Sec. 2
	: WBS Dictionary; SNL WP90 12147, Rev. 0, 4/19/90
Evaluation Pkg Ref	: OAL-1
Related Q-List Item	• N/h
Revision History	: Rev. 0, 7/24/90
Activity	: Systematic Acquisition of Site-Specific Subsurface
	Information (Preliminary scoping only)
WBS	: 1.2.3.2.2.2.1
SCP Reference	: 8.3.1.4.2.3
Description	: Scoping and planning activities preparatory to systematic
-	drilling program (PCA 1.0)
Assignment	: PRL Sec. 2
	: WBS Dictionary; SNL WP90 1232221, Rev.0, 4/19/90
Evaluation Pkg Ref	: OAL=1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90
	·

UNCONTROLLED

Rev. 0

Project Requirements List Section 2 -All Activities NOT Selected as Quality Activities for the QAL (Continued) (May Contain Activities Associated With IITS or IITWI)

Activity	: Radiological Studies (Radiological Monitoring Plan activities except Airborne Radionuclide, Surface Water, and Groundwater Monitoring)
WBS	: 1.2.5.4.5
SCP Reference	: N/A
Description	: All specified activities in Radiological Monitoring Plan except for water monitoring (Sec. 4.3.5) and airborne radionuclide monitoring (4.3.4)
Assignment	: PRL Sec. 2
Bases Info. Ref	: WBS Dictionary; YMP/88-14, Rev. 0
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	

Activity	:	Impacts of Offsite Installation Evaluation
WBS	:	1.2.5.5.2
SCP Reference		8.3.1.13
Description	:	Includes all subordinate activities.
Assignment		
Bases Info. Ref	:	WBS Dictionary; SCP 8.3.1.13
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item	:	N/A
Revision History	:	Rev. 0, 7/24/90

Activity	: Radiological Monitoring Program Support
WBS	: 1.2.5.6.2
SCP Reference	: 8.3.1.10
Description	: Includes all subordinate activities.
Assignment	: PRL Sec. 2
Bases Info. Ref	: WBS Dictionary; SCP Sec. 8.3.1.10
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: IITS
Revision History	: Rev. 0, 7/24/90

#### PRL

PRL Rev. O Page 8 of 26

PROJECT REQUIREMENTS LIST

APPENDIX A

EXEMPT ITEMS AND ACTIVITIES

Project Requirements List Appendix A - Exempt Items and Activities (Continued).

I. ITEMS

Item	: Heliport
WBS	: 1.2.4.3
Description	: SR 3.1.1.1.3 (part of Surface Service and Utility Systems)
Assignment	
Bases Info. Ref	
Evaluation Pkg Ref	: IITS-1, IITWI-1
Revision History	: Rev. 0, 7/24/90
-	
Item	: Site Preparation (resulting structures)
WBS	: 1.2.4.3
Description	: SR 3.1.1.2 (part of Surface Service and Utility
	Systems), includes following subsystems:
	clearing 3.1.1.2.1
	grading 3.1.1.2.2
	landscaping 3.1.1.2.3
	fencing 3.1.1.2.4
Assignment	
Bases Info. Ref	
Evaluation Pkg Ref	
Revision History	: Rev. 0, 7/24/90
Item	: Mining Support Facilities
WBS	: 1.2.4.3
Description	: SR 3.2.2.2 (part of Surface Facilities)
Assignment	: PRL Appendix A
Bases Info. Ref	
Evaluation Pkg Ref	: IITS-1, IITWI-1
Revision History	: Re♥. 0, //24/90
Item	: Backfill Facility
WBS	: 1.2.4.3
Description	: SR 3.2.2.3 (part of Surface Facilities)
Assignment	: PRL Appendix A
Bases Info. Ref	: SR
Evaluation Pkg Ref	
Revision History	: Rev. 0, 7/24/90
Wealpion wighting	
Item	: Handling and Storage Facility for Excavated Tuff
WBS	: 1.2.4.3
Description	: SR 3.2.2.4 (part of Surface Facilities)
Assignment	: PRL Appendix A
Bases Info. Ref	: SR
Evaluation Pkg Ref	
Revision History	: Rev. 0, 7/24/90

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Cooled Water System Item WBS : 1.2.4.3: SR 3.2.2.6 (part of Surface Facilities) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Receiving and Warehousing Facilities WBS : 1.2.4.3 : SR 3.2.3.5 (part of Balance of Plant) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Maintenance Facilities : 1.2.4.3 WBS : SR 3.2.3.6 (part of Balance of Plant) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Administration and Personnel Facilities Item : 1.2.4.3 WBS : SR 3.2.3.8 (part of Balance of Plant) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Sewage Treatment Plant Item : 1.2.4.3 WBS : SR 3.2.3.14 (part of Balance of Plant) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Training Facilities Item WBS : 1.2.4.3 : SR 3.2.3.16 (part of Balance of Plant) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History UNCONTROLLED

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Visitors Center Item WBS : 1.2.4.3 : SR 3.2.3.17 (part of Balance of Plant) Description Assignment : PRL Appendix A : SR Bases Info. Ref Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 : Standard Equipment Item : 1.2.4.3 WBS : SR 3.2.3.20 (part of Balance of Plant) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Concrete Batch Plant : 1.2.4.3 WBS : SR 3.2.3.22 (part of Balance of Plant) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Hoisthouse : 1.2.4.3 WBS Description : SR 3.3.2.1.1.20 (part of Men-And-Materials Shaft) Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 Item : Hoists WBS : 1.2.4.3 : SR 3.3.2.1.1.30 (part of Men-And-Materials Shaft) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Conveyances WBS : 1.2.4.3 : SR 3.3.2.1.1.60 (part of Men-And-Materials Shaft) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 UNCONTROLL

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Hoist ropes Ttem : 1.2.4.3 WBS Description : SR 3.3.2.1.1.70 (part of Men-And-Materials Shaft) : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Fixtures : 1.2.4.3 WBS : SR 3.3.2.1.2.50 (part of Men-And-Materials Shaft) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 : Ramp surface structure Item WBS : 1.2.4.3 : SR 3.3.3.1.1.10 (part of Tuff Ramp) Description : PRL Appendix A Assignment : SR Bases Info. Ref Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Roadway : 1.2.4.3 WBS : SR 3.3.3.1.2.50 (part of Tuff Ramp) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Inspection and repair hoist Item : 1.2.4.3 WBS : SR 3.3.7.1.1.30 (part of Emplacement Area Exhaust Shaft) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Conveyance Item : 1.2.4.3 WBS : SR 3.3.7.1.1.50 (part of Emplacement Area Exhaust Shaft) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History UNCONTROLLED

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Hoist ropes Item : 1.2.4.3 WBS : SR 3.3.7.1.1.60 (part of Emplacement Area Exhaust Shaft) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Inspection and repair hoist Item : 1.2.4.3 WBS : SR 3.3.8.1.1.30 (part of ES Modifications for Waste Description Emplacement Area Air Intake) : PRL Appendix A Assignment : SR Bases Info. Ref Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Hoist ropes : 1.2.4.3 WBS : SR 3.3.8.1.1.40 (part of ES Modifications for Waste Description Emplacement Area Air Intake) Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Conveyance : 1.2.4.3 WBS : SR 3.3.8.1.1.60 (part of ES Modifications for Waste Description Emplacement Area Air Intake) : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Borehole Drilling and Lining Equipment Item : 1.2.4.3 WBS : SR 3.4.3.1 (part of Underground Excavations) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90

3

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Shops, Warehouses, and Service Facilities Item WBS : 1.2.4.3 : SR 3.4.4 (part of Underground Excavations) Description Assignment : PRL Appendix A : SR Bases Info. Ref Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Excavated Tuff Handling System Item : 1.2.4.3 WBS : SR 3.5.11 (part of Underground Service and Utility Systems) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 : Backfill Handling and Placement System Item : 1.2.4.3 WBS : SR 3.5.13 (part of Underground Service and Utility Systems) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History Item : Materials and Supplies Handling System : 1.2.4.3 WBS : SR 3.5.14 (part of Underground Service and Utility Systems) Description Assignment : PRL Appendix A Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 Revision History : Rev. 0, 7/24/90 : Maintenance Shops Item : 1.2.4.3 WBS : SR 3.5.19 (part of Underground Service and Utility Systems) Description Assignment : PRL Appendix A : SR Bases Info. Ref Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History : Training Facility Item WBS : 1.2.4.3 : SR 3.5.30 (part of Underground Service and Utility Systems) Description : PRL Appendix A Assignment Bases Info. Ref : SR Evaluation Pkg Ref : IITS-1, IITWI-1 : Rev. 0, 7/24/90 Revision History

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Item	: Checkpoint
WBS	: 1.2.4.3
Description	: SR 3.5.40 (part of Underground Service and Utility Systems)
Assignment	: PRL Appendix A
Bases Info. Ref	: SR
Evaluation Pkg Ref	: IITS-1, IITWI-1
Revision History	: Rev. 0, 7/24/90

UNCONTROLLED

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

#### II. ACTIVITIES

Activity	: Management and Integration(except AP-6.17Q Support and
	non-administrative QA)
WBS	: 1.2.1.1
SCP Reference	: N/A
Description	: All subordinate activities except AP-6.17Q, QRB Support,
-	and non-administrative QA activities.
Assignment	: PRL App. A
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	
Activity	: Management and Integration (except non-administrative QA)
WBS	: 1.2.2.1
SCP Reference	: N/A
	: Waste Package M&I
Assignment	
Bases Info. Ref	
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	
Revision miscory	
Activity	: Management and Integration (except non-administrative QA)
Activity WBS	: Management and Integration (except non-administrative QA) : 1.2.3.1
WBS	
WBS SCP Reference	: 1.2.3.1 : N/A
WBS SCP Reference Description	: 1.2.3.1 : N/A : Site M&I
WBS SCP Reference Description Assignment	: 1.2.3.1 : N/A : Site M&I : PRL App. A
WBS SCP Reference Description Assignment Bases Info. Ref	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History	: 1.2.3.1 : N/A : Site M&I : PRL App. A : WBS Dictionary : QAL-1 : N/A
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Common-to-Drilling Support : 1.2.3.5.2.1</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Common-to-Drilling Support : 1.2.3.5.2.1 : 8.3.1</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Common-to-Drilling Support : 1.2.3.5.2.1 : 8.3.1 : Includes all subordinate activities.</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Common-to-Drilling Support : 1.2.3.5.2.1 : 8.3.1 : Includes all subordinate activities. : PRL App. A</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>
WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: 1.2.3.1 : N/A : Site M&amp;I : PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90</pre>

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Prototype Air Coring Activity WBS : 1.2.3.5.4 SCP Reference : N/A : Prototype work. Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History Activity : Deferred Site Closeout : 1.2.3.8 WBS : N/A SCP Reference : Site closeout Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History : Management and Integration (Administrative) Activity WBS : 1.2.4.1 : N/A SCP Reference : Portion of WBS 1.2.4.1 scope dealing with project Description management, administration, and interaction support Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History : Rock Mechanics Field Testing Activity : 1.2.4.2.1.3 WBS : N/A SCP Reference : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Management and Integration Activity WBS : 1.2.5.1 : N/A SCP Reference Description : Includes all subordinate activities : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Site Characterization Program Activity : 1.2.5.2.2 WBS SCP Reference : N/A : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Semi-Annual Progress Reports Activity WBS : 1.2.5.2.6 SCP Reference : N/A : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Site Recommendation Report : 1.2.5.2.7 WBS SCP Reference : N/A : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Environmental Compliance : 1.2.5.3 WBS SCP Reference : N/A : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History UNCONTROLLEI Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Activity : Aesthetics WBS : 1.2.5.4.1 SCP Reference : N/A : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Noise : 1.2.5.4.4 WBS : N/A SCP Reference : Includes all subordinate activities Description : PRL App. A Assignment : WBS Dictionary Bases Info. Ref Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Land Use/Resource Lands : 1.2.5.4.9 WBS : N/A SCP Reference : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Native American Interactions WBS : 1.2.5.4.10 : N/A SCP Reference : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Environmental Field Work Coordination Activity : 1.2.5.4.11 WBS SCP Reference : N/A : Includes all subordinate activities Description. Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History UNCONTROLLED

UNCONTROLLED

PRL Rev. 0

.

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Activity	: Socioeconomic Studies
WBS	: 1.2.5.6.1
SCP Reference	: N/A
	: Includes all subordinate activities
Assignment	: PRL App. A
Bases Info. Ref	· WBS Dictionary
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	
Revision history	. Rev. 0, 7/24/30
	: Communication and Liaison
Activity	: 1.2.5.7
WBS	
SCP Reference	: N/A
Description	: Includes all subordinate activities
Assignment	: PRL App. A
Bases Info. Ref	: WBS Dictionary
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90
-	
Activity	: Exploratory Shaft Management, Planning, and Technical
-	Assessment (Management and Planning Activities)
WBS	: 1.2.6.1.1
SCP Reference	: N/A
Description	: Portion of WBS 1.2.6.1.1 scope dealing with management and
2000-1p010-1	planning activities.
3 a a i mana a b	
	: PRL App. A
Bases Info. Ref	: PRL App. A : WBS Dictionary
Bases Info. Ref Evaluation Pkg Ref	: PRL App. A : WBS Dictionary : QAL-1
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: PRL App. A : WBS Dictionary : QAL-1 : N/A
Bases Info. Ref Evaluation Pkg Ref	: PRL App. A : WBS Dictionary : QAL-1 : N/A
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	: PRL App. A : WBS Dictionary : QAL-1 : N/A
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History	: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity	: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA)
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS	: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference	: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A : WBS Dictionary</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A : WBS Dictionary</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A : WBS Dictionary : QAL-1</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A : WBS Dictionary : QAL-1 : N/A</pre>
Bases Info. Ref Evaluation Pkg Ref Related Q-List Item Revision History Activity WBS SCP Reference Description Assignment Bases Info. Ref Evaluation Pkg Ref Related Q-List Item	<pre>: PRL App. A : WBS Dictionary : QAL-1 : N/A : Rev. 0, 7/24/90 : Quality Assurance (Administrative QA) : 1.2.6.1.2 : N/A : Includes all administrative QA activities : PRL App. A : WBS Dictionary : QAL-1 : N/A</pre>

ý.

2

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Activity	: Safety Analysis	
	: 1.2.6.1.3	
	: N/A	
	: Develop safety procedures for ESF construction.	
Assignment		
Bases Info. Ref		
Evaluation Pkg Ref		
Related Q-List Item		
Revision History	: Rev. 0, 7/24/90	
Activity	: ES-1 Hoist and Headframe	
	: 1.2.6.4.2	
	: N/A	
<b>►</b>		
Assignment		
Bases Info. Ref		
Evaluation Pkg Ref		
Related Q-List Item		•
Revision History	: Rev. 0, 7/24/90	
Activity	: ES-2 Hoist and Headframe	
WBS	: 1.2.6.5.2	
	: N/A	
Description Assignment	: Includes all subordinate activities. : PRL App. A	
	WDC Distionary	
Bases Info. Ref		
Evaluation Pkg Ref		
Related Q-List Item		
Revision History	: Rev. 0, 7/24/90	
Activity	: ES-1 Shaft Internals and Conveyances	
WBS	: 1.2.6.7.2	
SCP Reference	: N/A	
Description	: Includes all subordinate activities.	
Assignment	: PRL App. A	
Bases Info. Ref	: WBS Dictionary	
Evaluation Pkg Ref	•	
Related Q-List Item		
	i N/a	
Revision History	: Rev. 0, 7/24/90	
	. RC-2 Chaft Internals and Conveyances	
Activity	: ES-2 Shaft Internals and Conveyances	
WBS	: 1.2.6.7.3	
SCP Reference	: N/A	
Description	: Includes all subordinate activities.	
Assignment	: PRL App. A	
Bases Info. Ref	: WBS Dictionary	
Evaluation Pkg Ref		
Related Q-List Item		
Revision History		
WEATOTON HITSCOTA	IIIIAAI-	
· •	UNCONTR	
		ULLEU

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Operations (except 1.2.6.8.4) Activity WBS : 1.2.6.8 SCP Reference : N/A: Includes all subordinate activities except WBS 1.2.6.8.4 Description Integrated Data Systems : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History : Management and Integration (except non-administrative QA) Activity

	: 1.2.7.1
	: N/A
Description	: Includes all subordinate activities except
•	non-administrative QA.
	: PRL App. A
Bases Info. Ref	: WBS Dictionary ·
Evaluation Pkg Ref	: QAL-1
Related Q-List Item	: N/A
Revision History	: Rev. 0, 7/24/90

Activity	: Climax
WBS	: 1.2.7.2.1
SCP Reference	: N/A
Description	:Includes all subordinate activities
Assignment	: PRL App. A
Bases Info. Ref	: WBS dictionary
Evaluation Pkg Ref	
Related Q-List Item	
Revision History	: Rev. 0, 7/24/90

Activity	:	G-Tunnel
WBS	:	1.2.7.2.2
SCP Reference	:	N/A
Description	:	Includes all subordinate activities
	:	PRL App. A
Bases Info. Ref	:	WBS dictionary
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item		
Revision History		
-		-

Project Requirements List Appendix A - Exempt Items and Activities (Continued) : Field Operations Center Activity : 1.2.7.4.1 WBS : N/A SCP Reference : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Maintenance and Operations Activity WBS : 1.2.7.4.2 SCP Reference : N/A : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Administrative and Support Services Activity : 1.2.7.4.3 WBS : N/A SCP Reference : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : NTS Allocation : 1.2.7.5 WBS SCP Reference : N/A : Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Management and Integration Activity : 1.2.8.1 WBS : N/A SCP Reference : Includes all subordinate activities Description : PRL App. A Assignment : WBS Dictionary Bases Info. Ref Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A

Revision History : Rev. 0, 7/24/90

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

: Site Characterization Activity WBS : 1.2.8.2 SCP Reference : N/A: Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Repository Site WBS : 1.2.8.3.1 SCP Reference : N/A: Includes all subordinate activities Description : PRL App. A Assignment Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 : Transportation Routes Activity WBS : 1.2.8.3.2 SCP Reference : N/A : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : OAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History Activity : Management : 1.2.9.1.1 WBS : N/A SCP Reference : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : OAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Administrative Services WBS : 1.2.9.1.2 SCP Reference : N/A : Includes all subordinate activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History UNCONTROLLED

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Activity : Records Management : 1.2.9.1.4 WBS SCP Reference : N/A Description : Includes all subordinate activities Assignment : PRL App. A : WBS Dictionary Bases Info. Ref Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Project Control WBS : 1.2.9.2 SCP Reference : N/A Description : Includes all subordinate activities Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : Quality Assurance (Administrative activities) WBS : 1.2.9.3 SCP Reference : N/A: Includes all subordinate administrative activities Description Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90 Activity : State and Local Governments WBS : 1.2.10.1 SCP Reference : N/A Description : Includes all subordinate activities Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : OAL-1 Related Q-List Item : N/A : Rev. 0, 7/24/90 Revision History : Payments-Equal-to-Taxes Activity WBS : 1.2.10.2 SCP Reference : N/A Description : Includes all subordinate activities Assignment : PRL App. A Bases Info. Ref : WBS Dictionary Evaluation Pkg Ref : QAL-1 Related Q-List Item : N/A Revision History : Rev. 0, 7/24/90

Project Requirements List Appendix A - Exempt Items and Activities (Continued)

Activity	:	University Funding
4		1.2.10.3
		N/A
Description	:	Includes all subordinate activities
Assignment	:	PRL App. A
		WBS Dictionary
Evaluation Pkg Ref	:	QAL-1
Related Q-List Item		
Revision History		