OCRWM PROGRAM ANALYSIS

for the

U.S. DEPARTMENT OF ENERGY (OCRWM)

performed by

The WESTINGHOUSE HANFORD COMPANY

PURPOSE OF ANALYSIS

- ANSWERS THE QUESTION,

  "IS THE WAY WE'VE CHOSEN TO DO BUSINESS WORKING?"

- DETERMINES IF EXISTING *STANDARD PRACTICES* ARE RIGHT FOR THE JOB.
- IDENTIFIES ALL FUNCTIONS ESSENTIAL TO THE JOB.
- DEFINES FUNCTIONAL RELATIONSHIPS, I.E.,

  WHAT INFORMATION IS NEEDED TO ENABLE A FUNCTION TO BE PERFORMED

  AND WHAT FUNCTION PRODUCED THAT INFORMATION?

- DISCOVERS INTERFUNCTIONAL INCOMPATIBILITIES.
- MATCHES IMPOSED DIRECTIVES, REGULATIONS, ETC., TO THE AFFECTED FUNCTION(S).

AUTHOR: T. W. W[illegible]
PROJECT: OCRWM Programmatic Analysis

DATE: 5/11/91 4:00 PM
REV:

WORKING	READER	DATE
DRAFT		
X RECOMMENDED		
PUBLICATION		

LEGEND: CONTROLS (C); INPUTS (I); FUNCTION box #; OUTPUTS (O); TRANSFORM MECHANISM (M)

CONTEXT
child page #s of subordinate pages:

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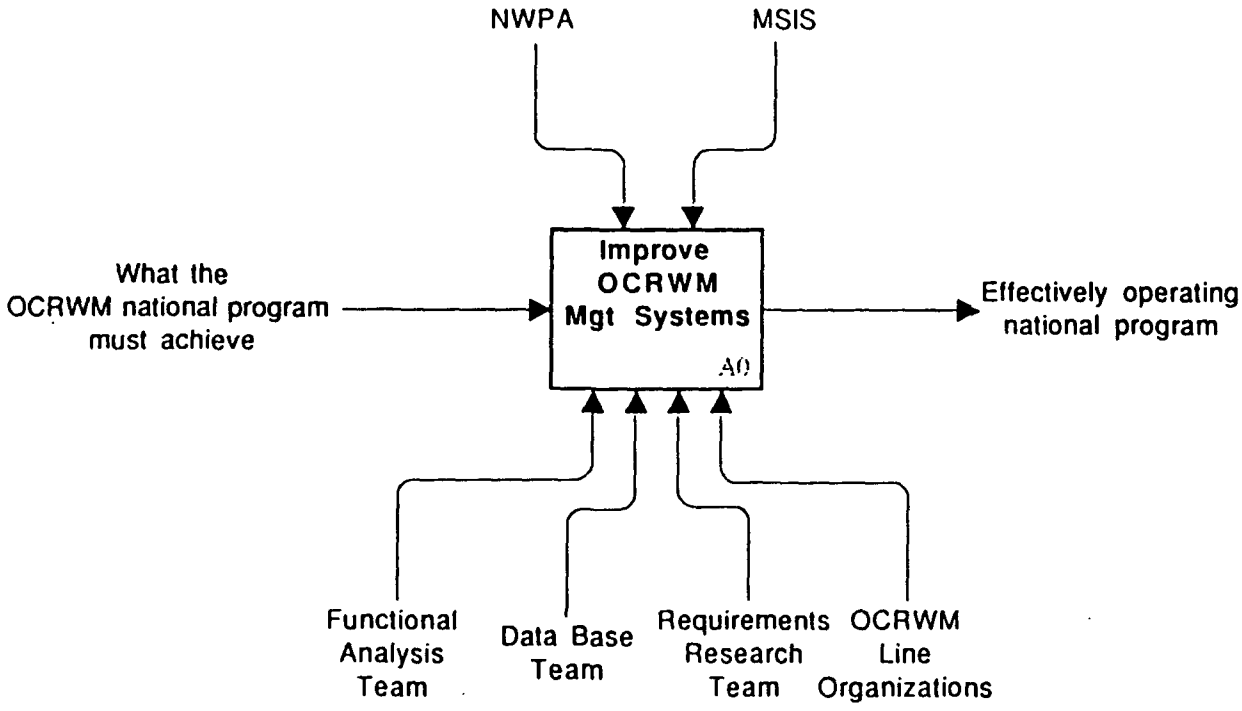
Parent pg# none
LEVEL Adjacent page #s none

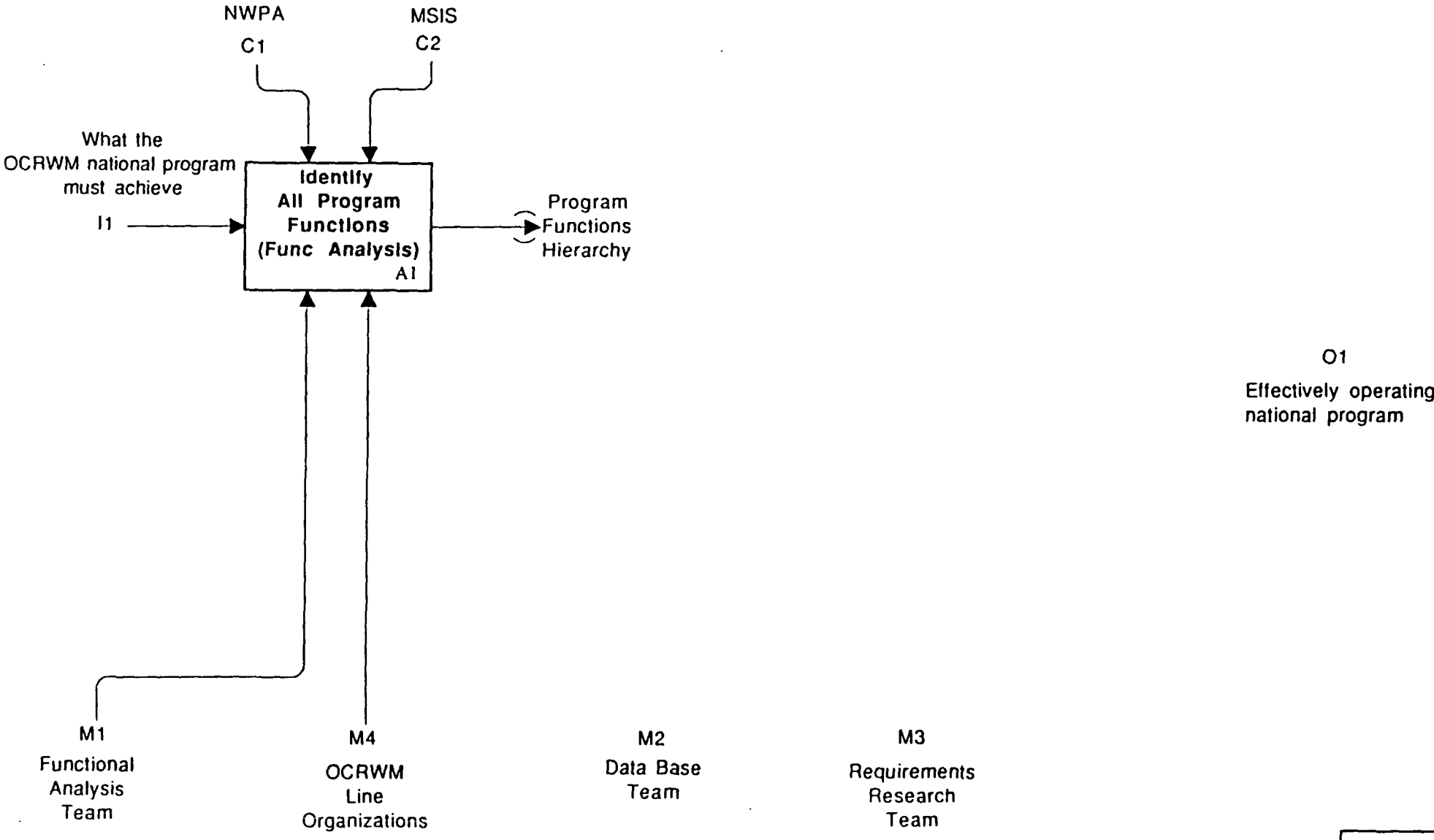


Westinghouse Hanford Company Systems and Operations Analysis Group

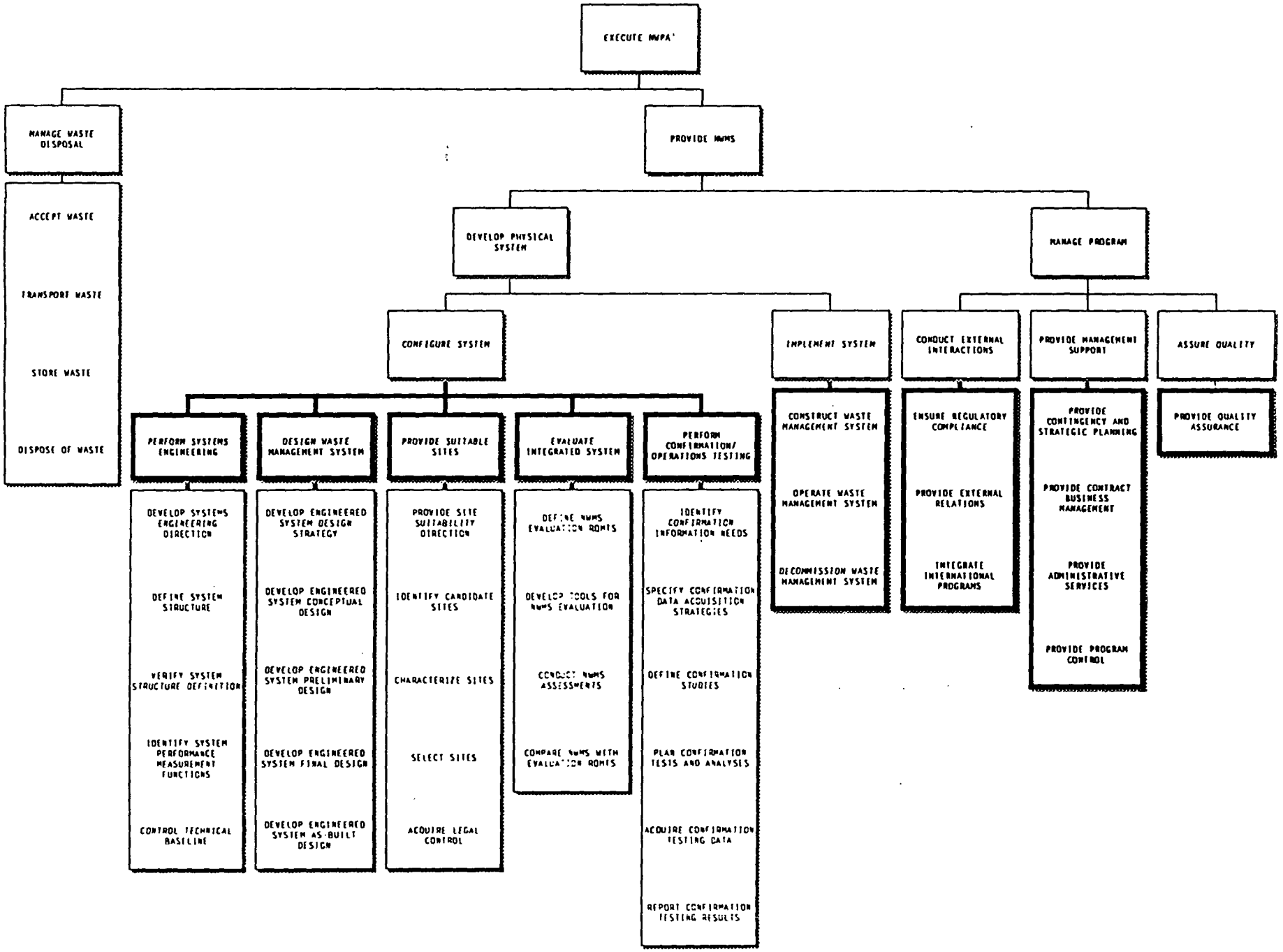
DIAGRAM TITLE: Objective of the OCRWM Programmatic Analysis Team

LEVEL 0
NODE: A-0
PAGE: 1

AUTHOR: T. W. Wo PROJECT: OCRWM Programmatic Analysis DATE: 5/11/91 4:42 PM REV:	WORKING DRAFT X RECOMMENDED PUBLICATION	READER DATE	LEGEND CONTROLS (C) INPUTS (I) → FUNCTION box # → OUTPUTS (O) TRANSFORM MECHANISM (M)	CONTEXT child page #s of subordinate pages:	Shaded box is this page a diagram parent page Parent pg# LEVEL Adjacent page #s



Westinghouse Hanford Company Systems and Operations Analysis Group	DIAGRAM TITLE: **Improve OCRWM Mgt Systems**	LEVEL NODE: A0 PAGE: 2


EXECUTE NWPA
MANAGE WASTE DISPOSAL
ACCEPT WASTE
TRANSPORT WASTE
STORE WASTE
DISPOSE OF WASTE
PROVIDE NWMS
DEVELOP PHYSICAL SYSTEM
MANAGE PROGRAM
CONFIGURE SYSTEM
IMPLEMENT SYSTEM
CONDUCT EXTERNAL INTERACTIONS
PROVIDE MANAGEMENT SUPPORT
ASSURE QUALITY
PERFORM SYSTEMS ENGINEERING
DEVELOP SYSTEMS ENGINEERING DIRECTION
DEFINE SYSTEM STRUCTURE
VERIFY SYSTEM STRUCTURE DEFINITION
IDENTIFY SYSTEM PERFORMANCE MEASUREMENT FUNCTIONS
CONTROL TECHNICAL BASELINE
DESIGN WASTE MANAGEMENT SYSTEM
DEVELOP ENGINEERED SYSTEM DESIGN STRATEGY
DEVELOP ENGINEERED SYSTEM CONCEPTUAL DESIGN
DEVELOP ENGINEERED SYSTEM PRELIMINARY DESIGN
DEVELOP ENGINEERED SYSTEM FINAL DESIGN
DEVELOP ENGINEERED SYSTEM AS-BUILT DESIGN
PROVIDE SUITABLE SITES
PROVIDE SITE SUITABILITY DIRECTION
IDENTIFY CANDIDATE SITES
CHARACTERIZE SITES
SELECT SITES
ACQUIRE LEGAL CONTROL
EVALUATE INTEGRATED SYSTEM
DEFINE NWMS EVALUATION ROMTS
DEVELOP TOOLS FOR NWMS EVALUATION
CONDUCT NWMS ASSESSMENTS
COMPARE NWMS WITH EVALUATION ROMTS
PERFORM CONFIRMATION/ OPERATIONS TESTING
IDENTIFY CONFIRMATION INFORMATION NEEDS
SPECIFY CONFIRMATION DATA ACQUISITION STRATEGIES
DEFINE CONFIRMATION STUDIES
PLAN CONFIRMATION TESTS AND ANALYSES
ACQUIRE CONFIRMATION TESTING DATA
REPORT CONFIRMATION TESTING RESULTS
CONSTRUCT WASTE MANAGEMENT SYSTEM
OPERATE WASTE MANAGEMENT SYSTEM
DECOMMISSION WASTE MANAGEMENT SYSTEM
ENSURE REGULATORY COMPLIANCE
PROVIDE EXTERNAL RELATIONS
INTEGRATE INTERNATIONAL PROGRAMS
PROVIDE CONTINGENCY AND STRATEGIC PLANNING
PROVIDE CONTRACT BUSINESS MANAGEMENT
PROVIDE ADMINISTRATIVE SERVICES
PROVIDE PROGRAM CONTROL
PROVIDE QUALITY ASSURANCE

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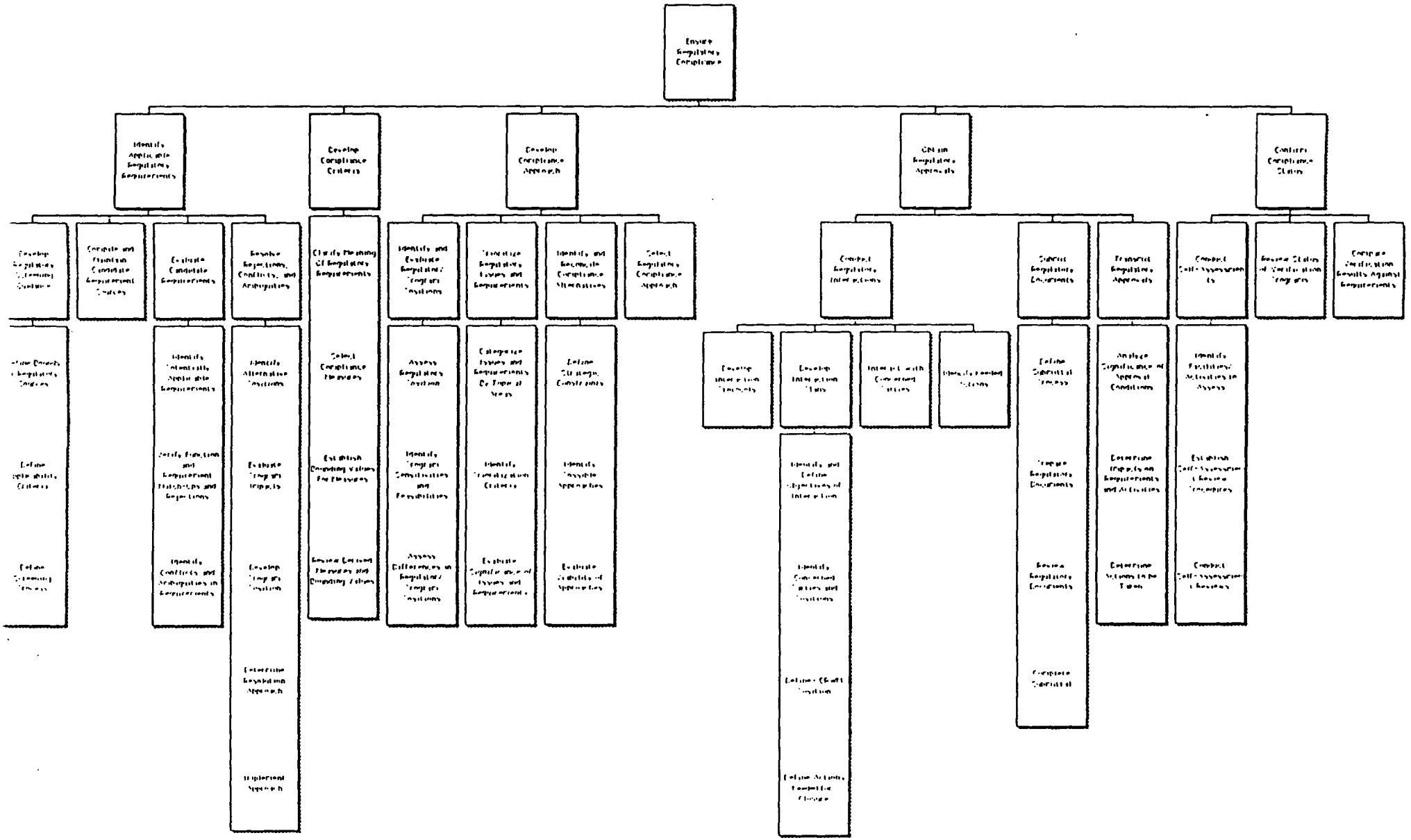
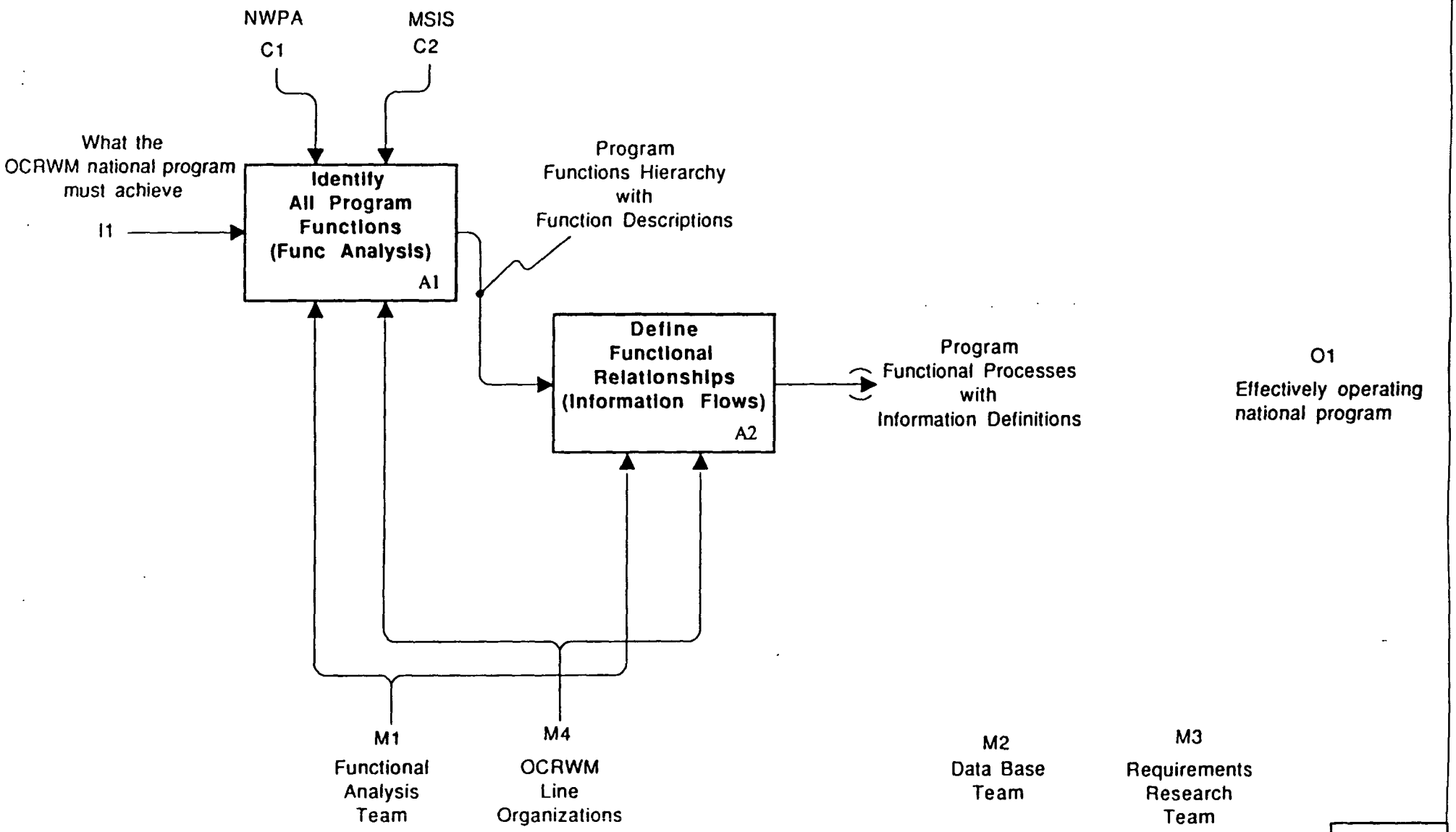

Ensure Regulatory Compliance
Identify Applicable Regulatory Requirements
Develop Compliance Criteria
Develop Compliance Approach
Obtain Regulatory Approvals
Confirm Compliance Status
Develop Regulatory Screening Guidance
Compile and Maintain Candidate Requirement Sources
Evaluate Candidate Requirements
Resolve Rejections, Conflicts, and Ambiguities
Clarify Meaning Of Regulatory Requirements
Identify and Evaluate Regulator/ Program Positions
Prioritize Regulatory Issues and Requirements
Identify and Reconcile Compliance Alternatives
Select Regulatory Compliance Approach
Conduct Regulatory Interactions
Submit Regulatory Documents
Transmit Regulatory Approvals
Conduct Self-Assessments
Review Status of Verification Programs
Compare Verification Results Against Requirements
Define Applicability Criteria
Define Screening Process
Identify Potentially Applicable Requirements
Verify Function and Requirement Matchups and Rejections
Identify Conflicts and Ambiguities in Requirements
Identify Alternative Positions
Evaluate Program Impacts
Develop Program Position
Determine Resolution Approach
Implement Approach
Select Compliance Measures
Establish Dounding Values For Measures
Review Derived Measures and Dounding Values
Assess Regulatory Position
Identify Program Sensitivities and Feasibilities
Assess Differences in Regulator/ Program Positions
Categorize Issues and Requirements By Topical Areas
Identify Prioritization Criteria
Evaluate Significance of Issues and Requirements
Define Strategic Constraints
Identify Possible Approaches
Evaluate Viability of Approaches
Develop Interaction Protocols
Develop Interaction Plans
Interact with Concerned Parties
Identify Needed Actions
Identify and Define Objectives of Interaction
Identify Concerned Parties and Positions
Define CRaft Position
Define Actions Needed for Closure
Define Submittal Process
Prepare Regulatory Documents
Review Regulatory Documents
Complete Submittal
Analyze Significance of Approval Conditions
Determine Impacts on Requirements and Activities
Determine Actions to be Taken
Identify Facilities/ Activities in Assess
Establish Self-Assessment Review Procedures
Conduct Self-Assessment Reviews

AUTHOR: T. W. W[illegible] PROJECT: OCRWM Programmatic Analysis DATE: 5/11/91 4:57 PM REV:	WORKING DRAFT X RECOMMENDED PUBLICATION	READER DAT[illegible]	LEGEND CONTROLS (C) INPUTS (I) FUNCTION box # OUTPUTS (O) TRANSFORM MECHANISM (M)	CONTEXT child page #s of subordinate pages:	Shaded [illegible] is this page a diagram[illegible]n parent page Parent pg# LEVEL Adjacent page #s



Westinghouse Hanford Company — Systems and Operations Analysis Group

DIAGRAM TITLE: **Improve OCRWM Mgt Systems**

LEVEL
NODE: A0
PAGE: 2

AUTHOR: T. W. [illegible]s	WORKING	READER	DAT[illegible]	LEGEND	CONTROLS (C)	CONTEXT	Shaded box is this page a[illegible]
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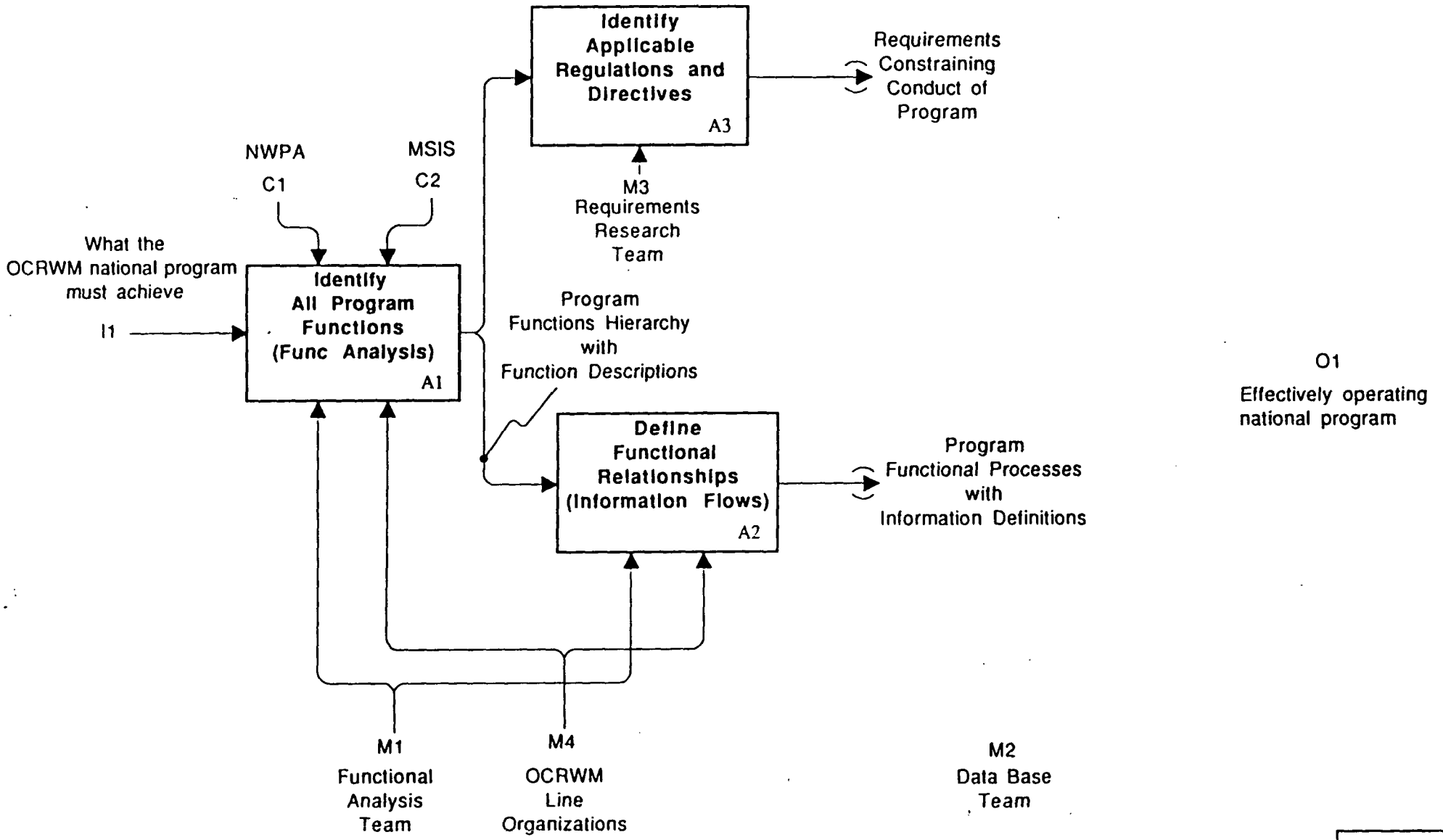
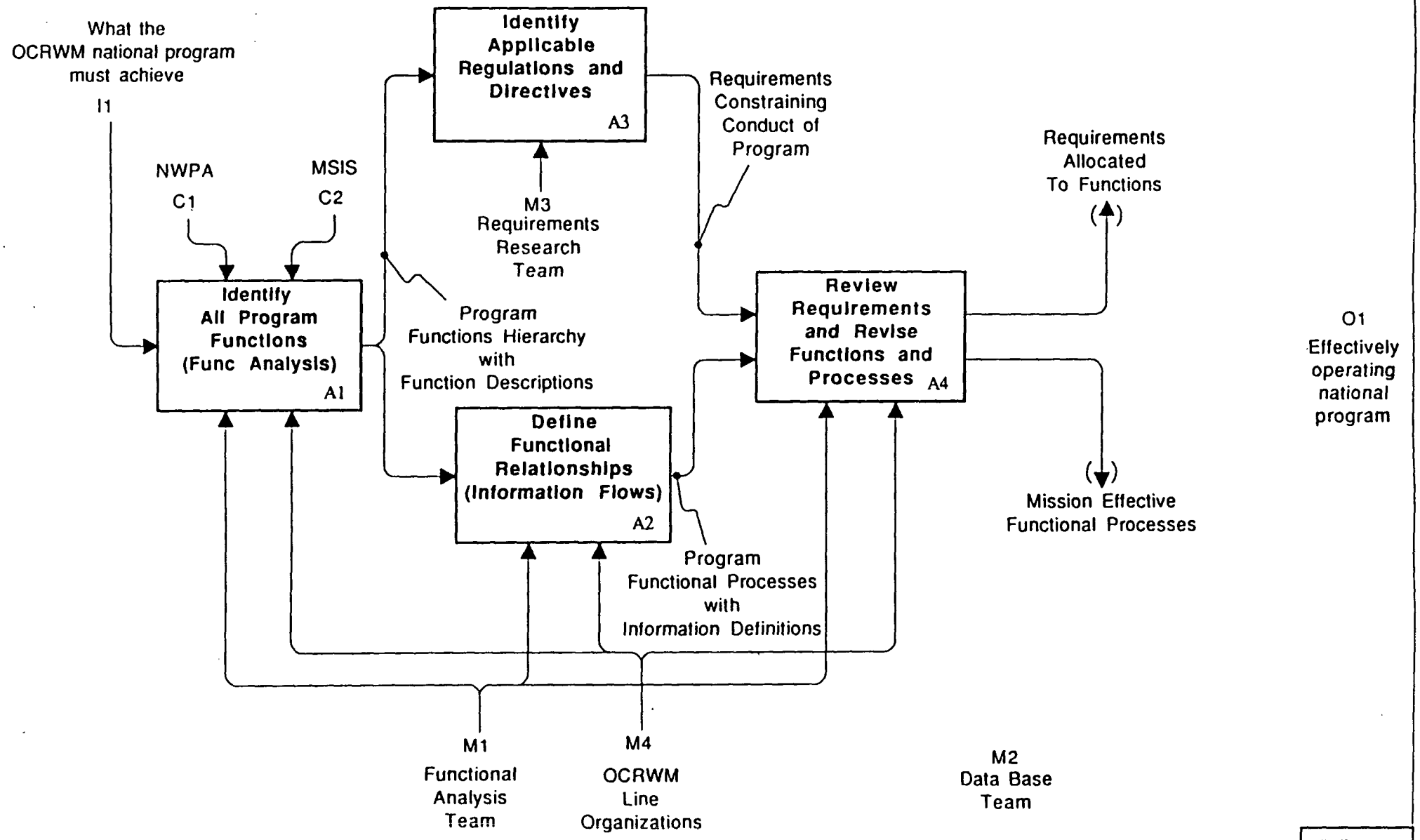


Westinghouse Hanford Company Systems and Operations Analysis Group

DIAGRAM TITLE: **Improve OCRWM Mgt Systems**

LEVEL
NODE: A0
PAGE: 2

AUTHOR: T. W. W[illegible] PROJECT: OCRWM Programmatic Analysis DATE: 5/11/91 6:16 PM REV:	WORKING DRAFT X RECOMMENDED PUBLICATION	READER DATE	LEGEND CONTROLS (C) INPUTS (I) → FUNCTION box # → OUTPUTS (O) TRANSFORM MECHANISM (M)	CONTEXT child page #s of subordinate pages:	Shaded box is this page a diagram [illegible] parent page Parent pg# LEVEL Adjacent page #s



Westinghouse Hanford Company Systems and Operations Analysis Group

DIAGRAM TITLE: **Improve OCRWM Mgt Systems**

LEVEL
NODE: A0
PAGE: 2

AUTHOR: T. W. W[illegible] PROJECT: OCRWM Programmatic Analysis DATE: 5/11/91 6:10 PM REV:	WORKING DRAFT X RECOMMENDED PUBLICATION	READER	DATE	LEGEND: CONTROLS (C), INPUTS (I), FUNCTION box #, OUTPUTS (O), TRANSFORM MECHANISM (M)

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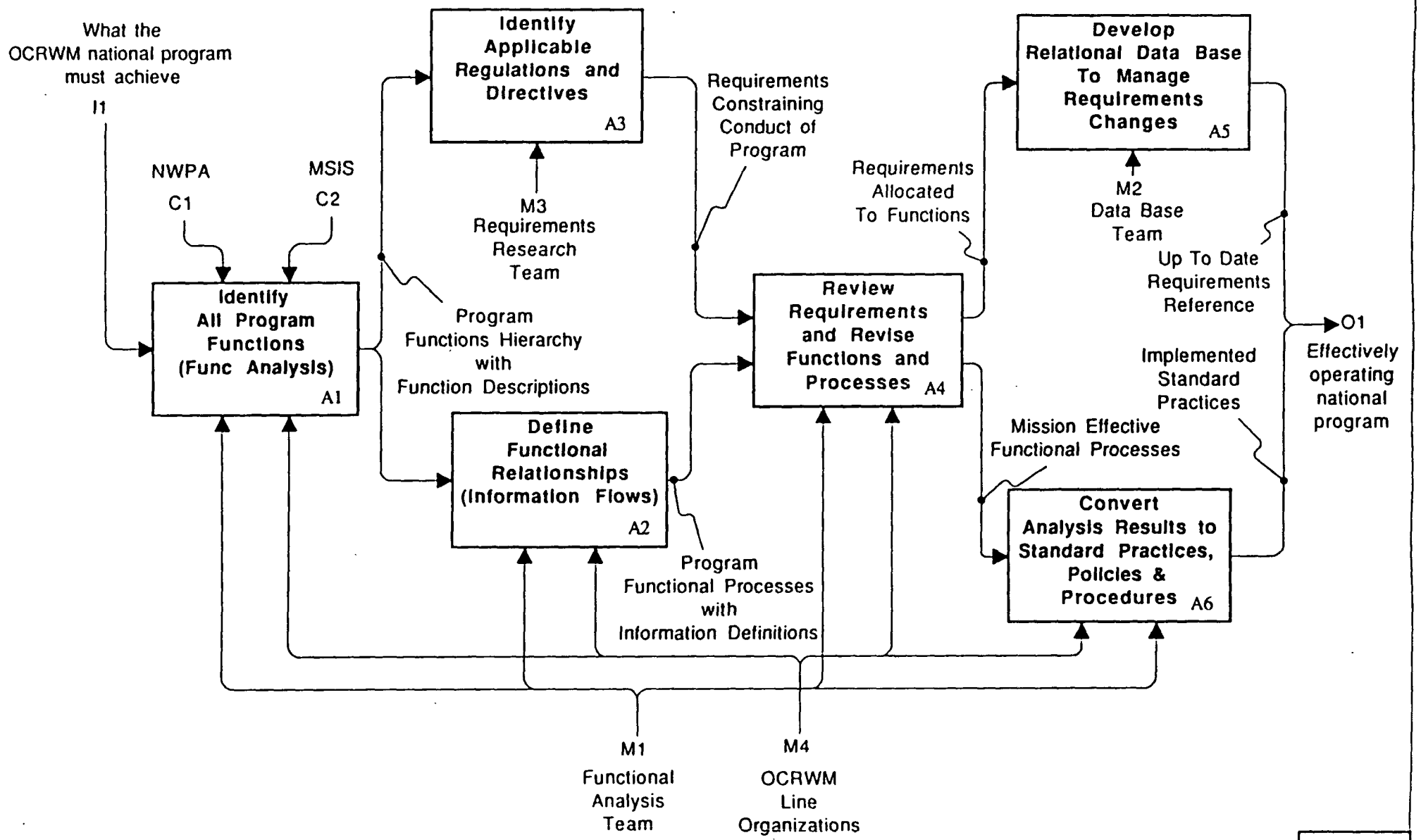


Westinghouse Hanford Company

Systems and Operations Analysis Group

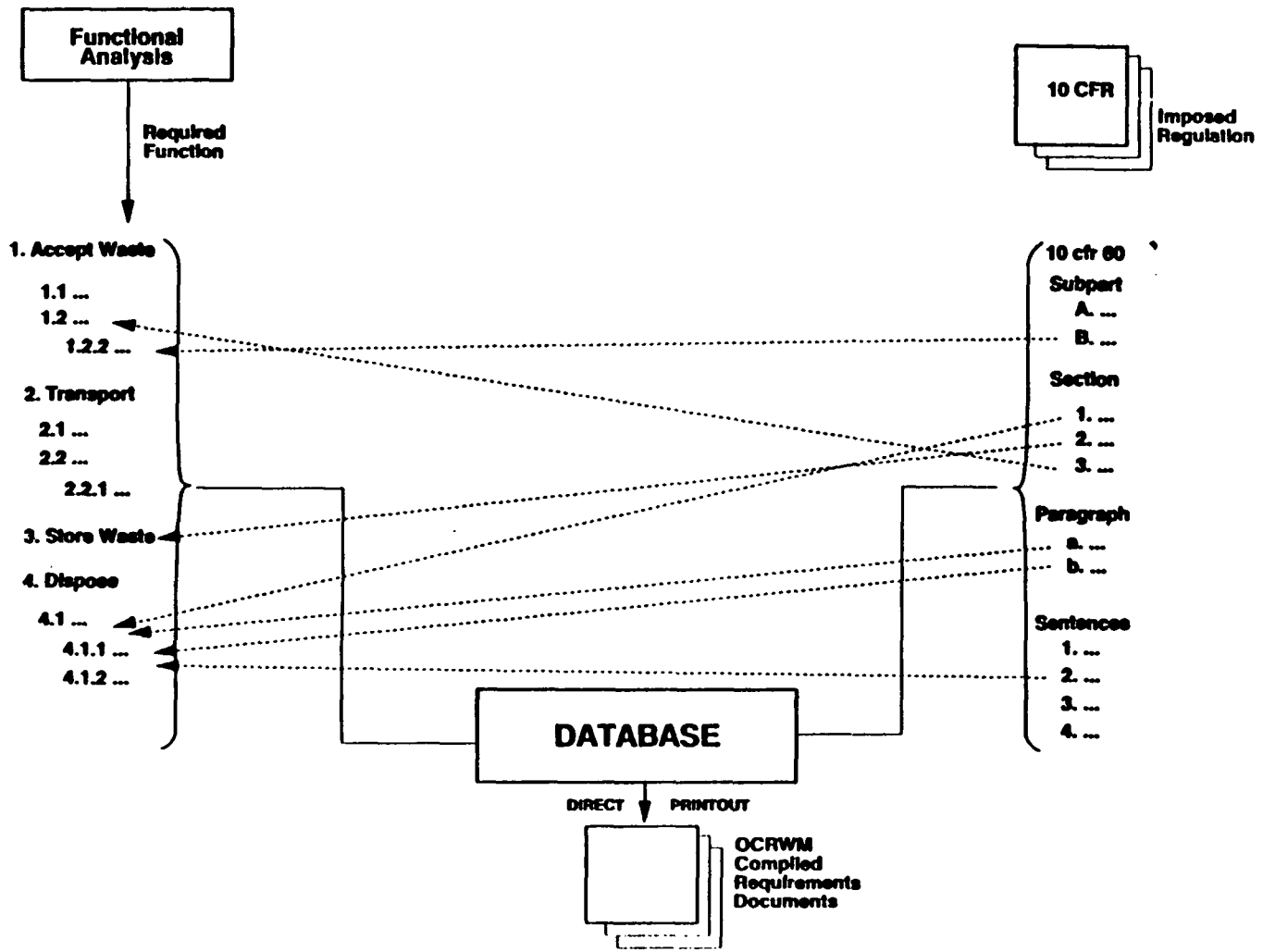
DIAGRAM TITLE: Improve OCRWM Mgt Systems

LEVEL

NODE: A0

PAGE: 2

TRACEABILITY OF REGULATORY REQUIREMENTS INTO FUNCTIONAL REQUIREMENTS

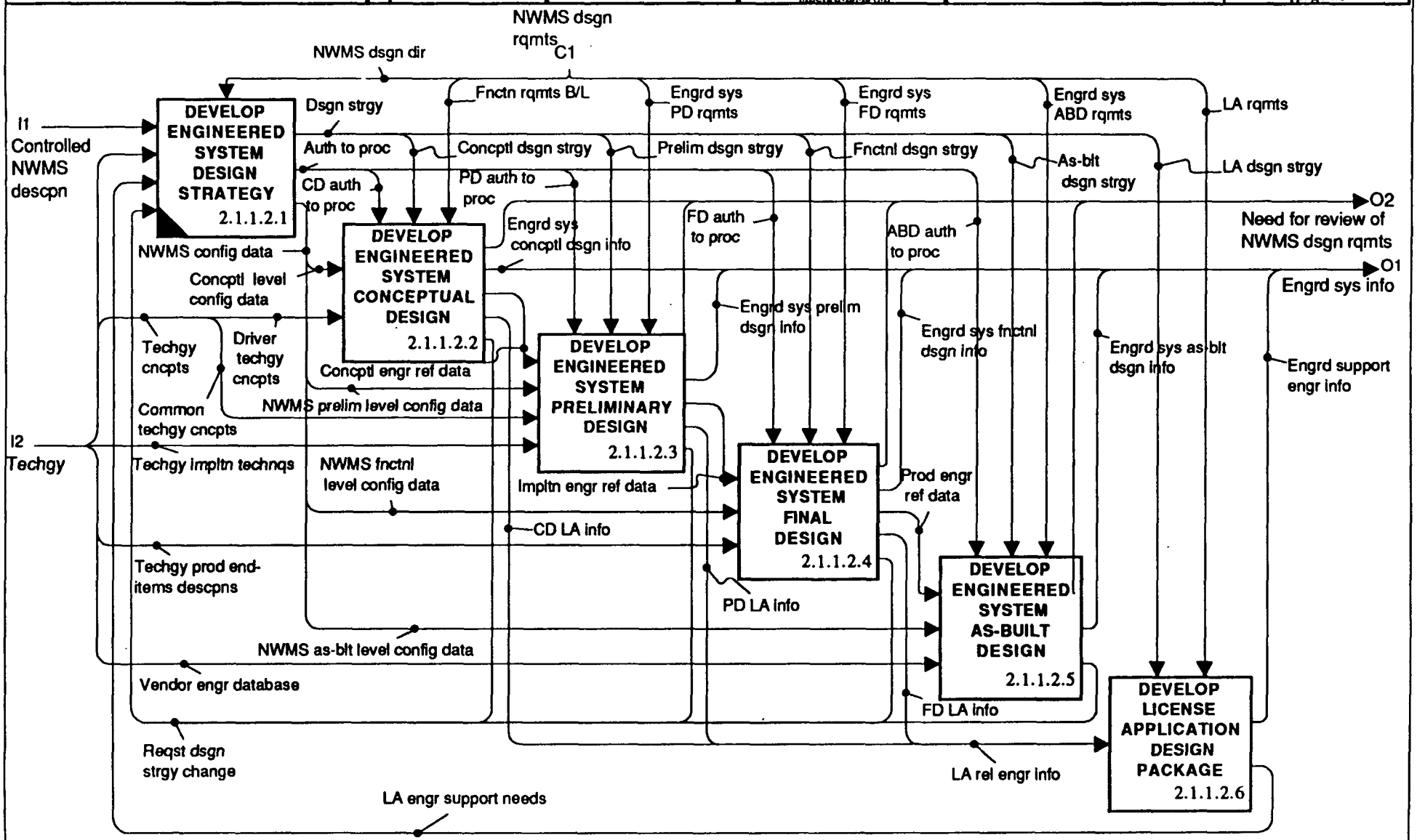


INTERFUNCTIONAL COMPATIBILITY: INSIGHTS INTO SOME PROGRAM DYNAMICS

EFFECTIVENESS OF THE ANALYSIS:

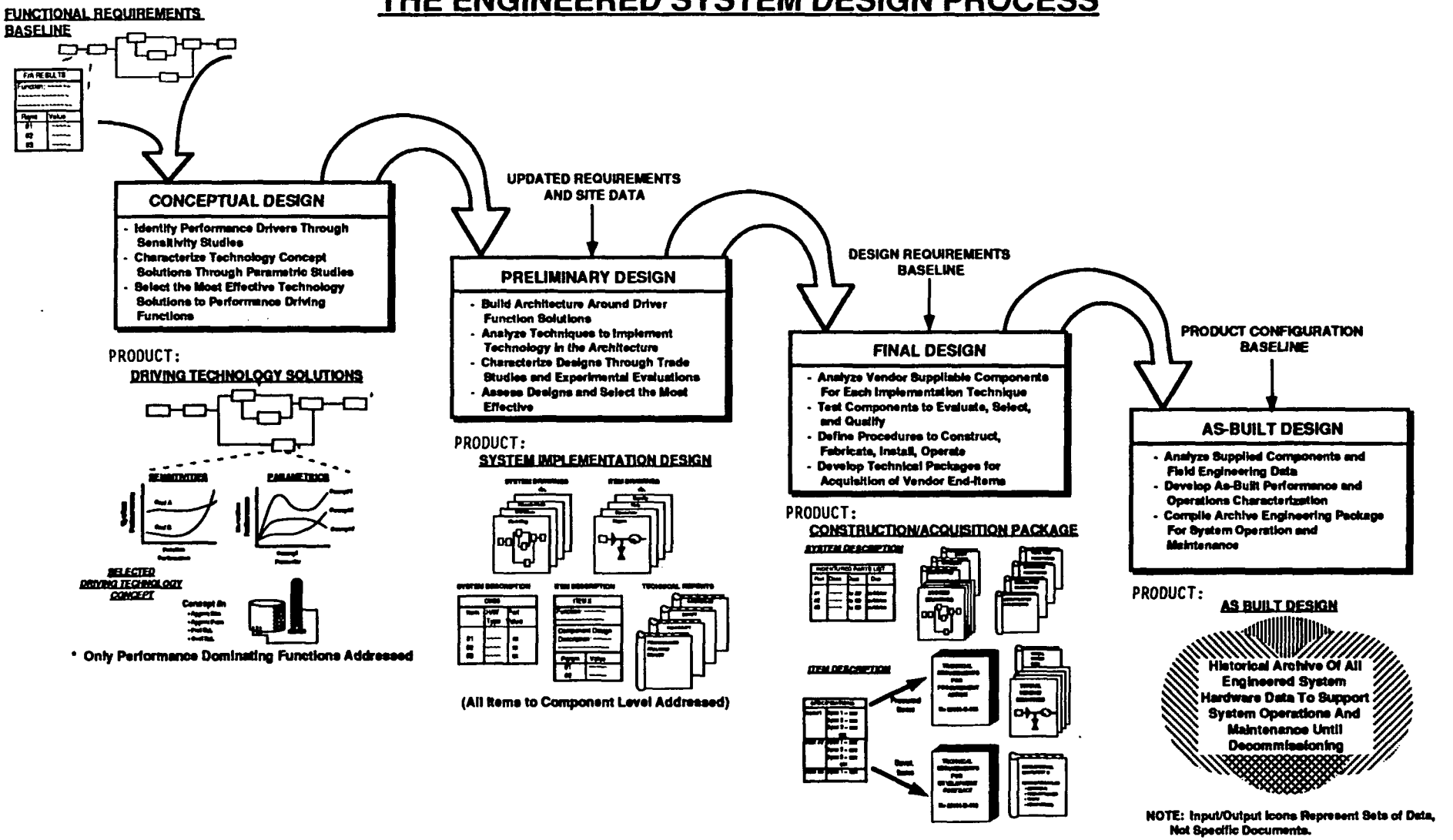
- ANALYTICAL IDENTIFICATION OF ESSENTIAL FUNCTIONS, FUNCTIONAL PROCESSES, AND MANDATORY INFORMATION FLOWS IS VERY POWERFUL.
- INTERFUNCTIONAL COMPATIBILITY IS VERY ELUSIVE.
- AN EXECUTABLE MODEL PROVIDES FAR MORE DYNAMIC REALISM.

AUTHOR: Programmatic Functional Analysis Team PROJECT: OCRWM Functional Analysis DATE: 7/2/91 9:00 AM REV: A	X IN-PROCESS DRAFT RECOMMENDED PUBLICATION	READER DATE	LEGEND: CONTROLS (C), INPUTS (I), OUTPUTS (O), TRANSFORM MECHANISMS (M)	CONTEXT child page #s of subordinate pages Top	Shaded boxes this page as diagramed on parent page Parent pg# LEVEL Adjacent page #s



Westinghouse Hanford Company	Waste Systems Engineering	Diagram Title: DESIGN ENGINEERED SYSTEMS	LEVEL NODE: 2.1.1.2 PAGE: 1

THE ENGINEERED SYSTEM DESIGN PROCESS



The Design Process Begins By Identifying the Drivers to System Performance and Then Builds the System Configuration Around the Solutions to These Performance Driving Functions

STATUS

- FUNCTIONAL ANALYSIS:
  - TECHNICAL WORK ON SEVEN FUNCTIONS WILL BE COMPLETED IN JULY
  - STANDARD PRACTICES FOR INTERIM SEMP COMPLETE
  - FINAL STANDARD PRACTICES DESCRIPTIONS IN SEPTEMBER
- DOCUMENT HIERARCHY (INFORMATION ARCHITECTURE):
  - PRELIMINARY COMPLETE EARLY APRIL, FINAL IN AUGUST
- REQUIREMENTS DATA BASE:
  - PROTOTYPE OPERATIONAL IN DECEMBER
  - PRODUCTION DATA BASE IN SEPTEMBER