

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
.01	.00			PROGRAM MANAGEMENT, SUPPORT & INFRASTRUCTURE				.22	.00		GENERAL REQUIREMENTS (Optional Breakout)
.01	.01	.01		Program Planning							
.01	.01	.02		Compliance Management							
.01	.01	.03		Pollution Prevention Management							
.01	.01	.04		Conservation/Environmental Restoration Management							
.01	.01	.05		Meetings and Interfaces							
.01	.01	.06		Budgeting and Financial Control/Tracking/Reporting							
.01	.01			Personnel Resources							
.01	.02	.01	.01	<i>HAZWOPER training</i>							
.01	.02	.01	.02	<i>Site orientation/emergency training</i>							
.01	.02	.01	.03	<i>Security training</i>							
.01	.02	.01	.04	<i>Ethics training</i>							
.01	.02	.01	.05	<i>Waste containment, handling, labeling, packaging, transportation and disposal</i>							
.01	.02	.01	.9x	<i>Other training and certification</i>							
.01	.02	.01		Training/Certification				.01	.03	.36	Training Certifications
.01	.02	.01		Training/Certification				.01	.03	.37	Medical Surveillance Certification
.01	.02	.01		Training/Certification				.17	.04	.20	Personnel Training
.01	.02	.02		Public Affairs/Community Relations							
.01	.02	.03		Administrative Support				.22	.02		Administration Job Office
.01	.02	.04		Procurement - Equipment & Material				.22	.03		Warehouse, Materials Handling, and Purchasing
.01	.02	.05		Engineering & Supervision				.22	.01		Supervision and Management
.01	.02	.06		Surveying and Quality Control				.22	.04		Engineering, Surveying, and Quality Control
.01	.02	.07		Legal Support/Regulatory Interaction							
.01	.02	.08	.01	<i>Personnel dosimetry</i>				.02	.02	.02	Personal Dosimetry
.01	.02	.08	.01	<i>Personnel dosimetry</i>							
.01	.02	.08	.01	<i>Rent for office space and housing</i>							
.01	.02	.08	.02	<i>Personnel radiation counting</i>				.02	.02	.03	Personnel Radiation Counting
.01	.02	.08	.02	<i>Personnel radiation counting</i>							
.01	.02	.08	.02	<i>Fixed costs related to environmental work</i>							
.01	.02	.08	.03	<i>Personal protective equipment/respirators/ventilators</i>							
.01	.02	.08	.03	<i>Ownership of temporary construction facilities</i>							
.01	.02	.08	.04	<i>Industrial safety (heat, cold, stress, noise, odor monitoring; industrial hygiene, confined space, etc)</i>							
.01	.02	.08	.05	<i>First aid/emergency response</i>							
.01	.02	.08	.06	<i>General safety monitor</i>				.02	.02	.01	Area Monitoring
.01	.02	.08	.06	<i>General safety monitor</i>							
.01	.02	.08	.07	<i>Safety evaluation and investigations</i>							
.01	.02	.08	.08	<i>Dosimetry system (electronic and thermoluminescence dosimeter reader)</i>				.02	.02	.04	Dosimetry Systems
.01	.02	.08	.08	<i>Dosimetry system (electronic and thermoluminescence dosimeter reader)</i>							
.01	.02	.08	.09	<i>Instrument calibration, health and safety QA/QC</i>				.02	.02	.05	Diagnostic, Quality Assurance, and Calibration
.01	.02	.08	.12	<i>Criticality Safety Program</i>							
.01	.02	.08		Medical / Health & Safety				.22	.07		Health & Safety
.01	.02	.10		Human Resources							
.01	.02			Program Support							
.01	.03	.01	.09	<i>Instrument calibration, health and safety QA/QC</i>							
.01	.03	.01	.10	<i>Medical examination</i>							
.01	.03	.01	.11	<i>Portal or access monitoring</i>							
.01	.03	.01	.9x	<i>Other</i>							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.01	.03	.01		Cost of Ownership				.22	.08		Temporary Construction Facilities-Ownership
.01	.03	.02		Interest and Fees and Cost of Money				.22	.12		Insurance, Interest, and Fees
.01	.03	.03		Cost of Money							
.01	.03	.04		General and Administrative							
.01	.03	.05		Award Fee							
.01	.03	.06		Fixed Fee							
.01	.03	.07	.01	<i>Computer support/hotline</i>							
.01	.03	.07	.01	<i>Guard houses</i>							
.01	.03	.07	.02	<i>Cafeteria/food services</i>							
.01	.03	.07	.02	<i>Access monitoring, protection, and control</i>							
.01	.03	.07	.03	<i>Cleaning/janitorial</i>							
.01	.03	.07		Support Services							
.01	.03	.07	.05	<i>Transportation Services</i>							
.01	.03	.07	.06	<i>Mail Services</i>							
.01	.03	.07	.07	<i>Library Services</i>							
.01	.03	.07	.08	<i>Video and photography</i>							
.01	.03	.08	01	<i>Telephone usage</i>				.22	.10	.01	Telephone usage
.01	.03	.08	02	<i>Electrical usage</i>				.22	.10	.02	Electrical usage
.01	.03	.08	03	<i>Sewer usage</i>				.22	.10	.03	Sewer usage
.01	.03	.08	04	<i>Water usage</i>				.22	.10	.04	Water usage
.01	.03	.08	05	<i>Gas usage</i>				.22	.10	.05	Gas usage
.01	.03	.08		Project Utilities				.22	.10		Project Utilities
.01	.03	.09		Miscellaneous Project Expenses				.22	.11		Miscellaneous Project Expenses
.01	.03	.10		Equipment Maintenance and Motor Pool				.22	.05		Equipment Maintenance and Motor Pool
.01	.03	.11	.03	<i>Barricades and barriers</i>							
.01	.03	.11	.04	<i>Laundry</i>							
.01	.03	.11	.04	<i>Administrative controls</i>							
.01	.03	.11	.05	<i>Deployment of guards and security forces</i>							
.01	.03	.11	.06	<i>Traffic control, signs and markers, barricades, road markings, etc.</i>							
.01	.03	.11	.9x	<i>Other</i>							
.01	.03	.11	.9x	<i>Other</i>							
.01	.03	.11		Traffic Control and Security				.22	.06		First Aid, Fire Protection, Traffic Control, and Security
.01	.03	.12		General Site Maintenance (road clearing, snow removal, site cleanup, etc)							
.01	.03	.13		Contingency							
.01	.03	.14	.01	<i>Federal tax</i>							
.01	.03	.14	.02	<i>State tax</i>							
.01	.03	.14	.03	<i>Local or county taxes</i>							
.01	.03	.14	.04	<i>Sale taxes</i>							
.01	.03	.14	.9x	<i>Other</i>							
.01	.03	.14		Taxes							
.01	.03	.15		Insurance				.22	.12		Insurance, Interest, and Fees
.01	.03	.15		Insurance							
.01	.03	.16	.01	<i>Orderly progression from operations to shutdown</i>							
.01	.03	.16	.02	<i>Staff reduction</i>							
.01	.03	.16	.03	<i>Re-assignment/training</i>							
.01	.03	.16	.04	<i>Key employee retention/incentive programs</i>							
.01	.03	.16	.9x	<i>Other</i>							
.01	.03	.16		Work Force Transition							
.01	.03	.17		Fire Protection							
.01	.03	.18		Refueling Station/Maintenance Shop							
.01	.03	.19		Asset Recovery							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.01	.03	.20		Contractor Transition Cost							
.01	.04			Government Personnel Resources							
.01	.05			Government Program Support							
.01	.06			Government Program Infrastructure							
.01	.06			Government - Program Infrastructure				.01	.04	.14	Government Trailers
.01	.06			Government - Program Infrastructure				.21	.01	.14	Government Trailers
.01	.01	.01		Program Planning							
.01	.01	.02		Compliance Management							
.01	.01	.03		Pollution Prevention Management							
.01	.01	.04		Conservation/Environmental Restoration Management							
.01	.02	.02		Public Affairs/Community Relations							
.01	.02	.07		Legal Support/Regulatory Interaction							
.01	.02	.09		Consulting Costs							
.02	.00			PROJECT MANAGEMENT & SUPPORT (Operable Unit / Solid Waste Management Unit)							
.02	.01	.01	.01	<i>Develop cost estimate</i>	.02	.01	.01				Develop Cost Estimate
.02	.01	.01	.02	<i>Cost/schedule control system</i>	.02	.01	.02				Cost / Schedule Control System
.02	.01	.01	.03	<i>Value engineering/cost analysis</i>	.02	.01	.03				Value Engineering / Cost Analysis
.02	.01	.01	.04	<i>Engineering network analysis</i>	.02	.01	.04				Engineering Network Analysis
.02	.01	.01	.04	<i>Engineering network analysis</i>				.01	.03	.35	Construction Scheduling (CPM)
.02	.01	.01	.05	<i>Manage, track and report equipment status</i>	.02	.01	.05				Manage, Track and Report Equipment Status
.02	.01	.01	.06	<i>Attend scoping meeting</i>	.02	.01	.07				Attend Scoping Meeting
.02	.01	.01	.07	<i>Conduct site visit</i>	.02	.01	.06				Conduct Site Visit
.02	.01	.01	.07	<i>Conduct site visit</i>				.01	.02	.02	Site Visits/Meetings (During RA)
.02	.01	.01	.08	<i>Evaluate existing data</i>	.02	.01	.08				Evaluate Existing Data
.02	.01	.01	.09	<i>Attend public meetings/hearing/meetings with PRP's</i>	.03	.01					Attend Meetings
.02	.01	.01	.09	<i>Attend public meetings/hearing/meetings with PRP's</i>	.17	.01					Attend Public Meetings/Hearings/Meetings with PRP's
.02	.01	.01	.10	<i>Prepare reports/participate in reviews</i>	.02	.01	.09				Prepare Reports / Participate in Reviews
.02	.01	.01	.10	<i>Prepare reports/participate in reviews</i>	.17	.03	.00				Assist in Preparation of Documents
.02	.01	.01	.10	Prepare Reports / Participate in Reviews				.17	.05	.05	Status Review
.02	.01	.01	.11	<i>Proposed plan support</i>							
.02	.01	.01	.12	<i>Responsiveness summary report</i>							
.02	.01	.01	.13	<i>Work assignment closeout</i>							
.02	.01	.01	.14	<i>Project closeout</i>	.02	.01	.10				Project Closeout
.02	.01	.01	.15	<i>Field supervision</i>							
.02	.01	.01	.16	<i>QA/QC and site inspection</i>							
.02	.01	.01	.17	<i>Develop schedules and schedule estimates</i>							
.02	.01	.01	.18	<i>Product review, inspection, testing, and acceptance</i>							
.02	.01	.01	.9x	<i>Other</i>							
.02	.01	.01		Project Management	.02	.01	.00				Conduct Project Management
.02	.01	.02	.01	<i>Procurement of subcontractors</i>	.02	.02	.01				Procurement of Subcontractors
.02	.01	.02	.02	<i>Perform subcontract management</i>							
.02	.01	.02	.03	<i>Contractor QA program</i>	.02	.02	.02				Contractor QA Program
.02	.01	.02	.04	<i>Coordinate with analytical laboratory</i>	.02	.02	.03				Coordinate with Analytical Laboratory
.02	.01	.02	.04	<i>Coordinate with analytical laboratory</i>							
.02	.01	.02		Support Subcontracting Activities	.02	.02	.00				Support Subcontracting Activities
.02	.01	.03	.00	Administration / Reporting	.02	.03	.00				Administration / Reporting
.02	.01	.03	.01	<i>Meeting participation/routine communications</i>							
.02	.01	.03	.02	<i>Prepare presentation materials</i>							
.02	.01	.03	.03	<i>Assist in preparation of documents</i>							
.02	.01	.03	.04	<i>Compile documents</i>	.03	.02	.00				Compile Documents

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.02	.01	.03	.04	Compile documents	.03	.02	.01				Prepare Draft Administrative Record Index
.02	.01	.03	.04	Compile documents	.03	.02	.02				Prepare Administrative Record Index
.02	.01	.03	.04	Compile documents	.03	.02	.03				Coordinate Duplication of Administrative Record
.02	.01	.03	.06	Document cost and performance status	.02	.03	.01				Document Cost and Performance Status
.02	.01	.03	.07	Billings	.02	.03	.02				Billings
.02	.01	.04	.01	Provide technical assistance - responsiveness summary	.17	.03	.02				Responsiveness Summary
.02	.01	.04	.02	Provide technical assistance - proposed plan and ROD	.17	.03	.01				Proposed Plan
.02	.01	.04	.02	Provide technical assistance - proposed plan and ROD	.17	.03	.03				Decision Document
.02	.01	.04	.03	Prepare feasibility addendum							
.02	.01	.04	.05	Assemble/update administrative record and index	.03	.03					Assemble / Update Administrative Record and Index
.02	.01	.04		Post Studies and Design Support	.17	.00					POST ASSESSMENT SUPPORT
.02	.01	.05	.00	Negotiation Support							
.02	.01	.05	.01	Attend negotiation sessions and meetings							
.02	.01	.05	.02	Review of PRP documents							
.02	.01	.05	.03	Provide technical memorandum							
.02	.01	.06	.01	Coordinate with administrative record coordinator							
.02	.01	.06	.02	Provide assistance in document compilation							
.02	.01	.06	.03	Prepare draft administrative record index							
.02	.01	.06	.04	Prepare administrative record index							
.02	.01	.06	.05	Coordinate duplication of administrative index							
.02	.01	.06	.06	Assemble administrative record and index							
.02	.01	.06		Administration Record	.03	.00					ADMINISTRATIVE RECORD
.02	.01			Project Management / Support / Administration	.02	.00					PROJECT MANAGEMENT / SUPPORT / ADMIN
.02	.01			Project Management /Support/Administration							
.02	.02	.01		Conduct Community Interviews	.04	.01					Conduct Community Interviews
.02	.02	.02	.00	Provide Support for Community Relations	.04	.02	.00				Provide Support for Community Relations
.02	.02	.02	.01	Prepare fact sheets	.04	.02	.01				Prepare Fact Sheets
.02	.02	.02	.02	Participate in public meetings/hearings	.04	.02	.02				Participate in Public Meetings / Hearings
.02	.02	.02	.03	Support briefings	.04	.02	.03				Support Briefings
.02	.02	.02	.04	Facility tours							
.02	.02	.03		Maintain Public Information Repository	.04	.03					Maintain Public Information Repository
.02	.02			Community Relations	.04	.00					COMMUNITY RELATIONS
.02	.03	.01	.00	Support Meetings with Regulators	.05	.01					Support Meetings with Regulators
.02	.03	.01	.00	Support Meetings with Regulators	.17	.02					Prepare Presentation Materials
.02	.03	.02	.00	Coordination of Laws & Regulations	.05	.02	.00				Coordination of Laws & Regulations
.02	.03	.02	.01	Prepare initial notification	.05	.02	.01				Prepare Initial Notification
.02	.03	.03	.00	Develop Interagency Agreement	.05	.03	.00				Develop Interagency Agreement
.02	.03	.03	.01	Agency review support	.05	.03	.01				Agency Review Support
.02	.03	.03	.02	State & local agency review	.05	.03	.02				State & Local Agency Review
.02	.03	.04	.01	Post construction/removal report				.21	.06	.05	Construction Documentation Report
.02	.03	.04	.01	Post construction/removal report				.21	.06	.07	Removal Reports
.02	.03	.04	.02	Preliminary close-out report							
.02	.03	.04	.03	Final close-out report							
.02	.03	.04	.04	Five-year reviews							
.02	.03	.04	.05	Notice of site deletion							
.02	.03	.04	.9x	Others							
.02	.03	.04		Regulatory Reports/Reviews	.05	.04					Develop Regulatory Reports / Permits / Reviews
.02	.03	.05	.01	RCRA permitting							
.02	.03	.05	.02	CERCLA permitting							
.02	.03	.05	.03	NRC permitting							
.02	.03	.05	.04	NPDES permitting							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.02	.03	.05	.05	Transportation permitting							
.02	.03	.05	.06	Wetland permitting							
.02	.03	.05	.07	State and local permits							
.02	.03	.05	.9x	Other							
.02	.03	.05		Regulatory Permitting (e.g., RCRA Part B Permit)	.05	.04					Develop Regulatory Reports / Permits / Reviews
.02	.03	.05		Regulatory Permitting (e.g., RCRA Part B Permit)				.01	.03	.38	Permits
.02	.03	.05		Regulatory Permitting (e.g., RCRA Part B Permit)				.17	.01	.02	Licensing
.02	.03	.05		Regulatory Permitting (e.g., RCRA Part B Permit)				.21	.06	.08	Regulatory Approvals
.02	.03	.05	.09	Dangerous waste permit application							
.02	.03	.05	.10	Limited construction authorization request							
.02	.03	.05	.11	Construction authorization request							
.02	.03	.05	.12	Operations authorization request							
.02	.03	.06	.08	Air emissions permits							
.02	.03	.06		Update Regulatory Permits (e.g., RCRA Part B Permit)							
.02	.03			Regulatory Interaction	.05	.00					REGULATORY INTERACTION
.02	.04	.01		Signs and Markers				.20	.02		Permanent Markers
.02	.04	.01		Signs and Markers				.20	.03		Permanent Features
.02	.04	.02		Conduct Procedures and Manuals							
.02	.04	.03		Fencing/Barriers							
.02	.04	.04		Land Record Management							
.02	.04	.05		Transferred Property Restriction							
.02	.04	.06		Verification of Institutional Controls							
.02	.04			Institutional Controls				.01	.08		Institutional Controls
.02	.05	.01		Identify Long Lead Items	.19						IDENTIFICATION OF LONG LEAD ITEMS
.02	.05	.02	.01	Support preparation of solicitation package	.22	.01	.01				Support Preparation of Solicitation Package
.02	.05	.02	.02	Printing and distribution of contract documents	.22	.01	.02				Printing and Distribution of Contract Documents
.02	.05	.02	.03	Advertising/soliciting of bids	.22	.01	.03				Advertising/Soliciting of Bids
.02	.05	.02	.04	Issuing addenda	.22	.01	.04				Issuing Addenda
.02	.05	.02	.05	Pre-bid (pre-solicitation) meetings	.22	.01	.05				Prebid(Pre-Solicitation) Meetings
.02	.05	.02	.06	Resolution of bidder (offeror) inquiries	.22	.01	.06				Resolution of Bidder (Offeror) Inquiries
.02	.05	.02	.07	On-site visits	.22	.01	.07				On-Site Visits
.02	.05	.02		Perform Prebid (Pre-Solicitation) Activities	.22	.01	.00				Perform Prebid (Pre-Solicitation) Activities
.02	.05	.03	.01	Receipt of bids (offers)	.22	.02	.01				Receipt of Bids (Offers)
.02	.05	.03	.02	Determination of responsive, responsible bidders	.22	.02	.02				Determination of Responsive, Responsible Bidders
.02	.05	.03	.03	Bid tabulation	.22	.02	.03				Bid Tabulation
.02	.05	.03	.04	Bid analysis	.22	.02	.04				Bid Analysis
.02	.05	.03	.05	Receipt of follow-up items from low responsible bidder	.22	.02	.05				Receipt of Follow-Up Items From Low. Resp. Bidder
.02	.05	.03	.06	Review of EEO, MBE requirements, SDB subcontractor plans	.22	.02	.06				Review of Eeo, MBE Require., Sdb Subcontr. Plans
.02	.05	.03	.07	Reference checks	.22	.02	.07				Reference Checks
.02	.05	.03	.08	Request for consent from EPA	.22	.02	.08				Request for Consent from EPA
.02	.05	.03	.09	Support preparation of contract documents	.22	.02	.09				Support Preparation of Contract Documents
.02	.05	.03		Perform Pre-award Activities	.22	.02	.00				Perform Preaward Activities
.02	.05	.04		Evaluation of Contracting Approaches, Management Options and Management Approaches							
.02	.05			Post Design Support	.22	.00					POST DESIGN SUPPORT
.02	.06			Procurement and Warehousing of Equipment and Material				.17	.03	.02	Radiation Protection and Health Physics Equipment
.02	.06			Procurement and Warehousing of Equipment and Material				.17	.03	.03	Security and Maintenance Equipment for Long-Term Storage
.02	.07	.01		Submittal Reviews	.23	.01					Submittal Reviews
.02	.07	.02		Site Inspection	.23	.02					Site Inspection
.02	.07	.03		Document Activities	.23	.03					Document Activities
.02	.07	.04		Participate in Construction Management Meetings	.23	.04					Participate In Construction Management Meetings

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
.02	.07			A/E Support	.23	.00					A/E SUPPORT DURING REMEDIAL ACTION
.02	.07			A/E Support				.33	.00		ENGINEERING DURING CONSTRUCTION (EDC)
.02	.08			Contractor Construction Management				.33	.00		SUPERVISION & ADMINISTRATION (S&A) CONSTRUCTION MANAGEMENT
.02	.09			Government Construction Management				.33	.00		SUPERVISION & ADMINISTRATION (S&A) CONSTRUCTION MANAGEMENT
.02	.10			Independent Contractor Verification of Cleanup or Reuse							
.02	.10			Independent Contractor Verification of Cleanup or Reuse							
.02	.11	.01		PRP Searches / Field Investigations	.18	.01					PRP Searches / Field Investigations
.02	.11	.02	.01	Attend Negotiation Sessions and Meetings	.18	.02	.01				Attend Negotiation Sessions and Meetings
.02	.11	.02	.02	Review of PRP Documents	.18	.02	.02				Review of PRP Documents
.02	.11	.02	.03	Document Findings	.18	.02	.03				Document Findings
.02	.11	.02		PRP Negotiation Support	.18	.02	.00				PRP Negotiation Support
.02	.11			Enforcement	.18	.00					ENFORCEMENT SUPPORT
.02	.12			Asset Recovery							
.02	.13			Configuration Management							
.02	.14	.01	.01	<i>Support, Coordination, and Participation in ISM Teams</i>							
.02	.14	.01	.02	<i>ISM documents development and maintenance</i>							
.02	.14	.01	.03	<i>Project ISM implementation costs</i>							
.02	.14	.01	.9x	<i>Other</i>							
.02	.14	.01		Project Integrated Safety Management (ISM)							
.02	.14	.02		Accident Analysis							
.02	.14	.03		Risk and Reliability							
.02	.14	.04		Fire Hazard Analysis							
.02	.14	.05	.01	<i>Preliminary Safety Analysis Report</i>							
.02	.14	.05	.02	<i>Final Safety Analysis Report</i>							
.02	.14	.05	.9x	<i>Other</i>							
.02	.14	.05		Safety Analysis Report							
.02	.14	.06		Hazard Analysis Reports							
.02	.14	.07		Project Industrial Safety and Health							
.02	.14	.08		Project Safety Monitoring							
.02	.14			Facility/plant management							
.02	.14			Project Safety and Health							
.02	.15			Contract Closeout							
.02	.16			Realty Services							
.02	.17			Regulatory Agency Oversight Staff							
.02	.18	.01		Records Management Facility							
.02	.18	.02		Archived Records Management							
.02	.18	.03		Electronic Records Management							
.02	.18	.04		Records Declassification							
.02	.18	.9x		<i>Other</i>							
.02	.18			Information Management							
.02	.19	.01		Workers Compensation Cases							
.02	.19	.02		Claims Review							
.02	.19	.03		Claims Management							
.02	.19	.04		Discovery Review							
.02	.19	.05		Discovery Litigation							
.02	.19	.06		Freedom of Information Act Reviews							
.02	.19			Litigation Support							
.03	.00			PREPARATION OF PLANS	.01	.00					PREPARATION OF PLANS
.03	.00			PREPARATION OF PLANS				.17	.01	.00	Pre-Decommissioning Operations

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.03	.01			Work Plan	.01	.01					Work Plan
.03	.02			Chemical Data Acquisition Plan	.01	.02					Chemical Data Acquisition Plan
.03	.02			Chemical Data Acquisition Plan				.01	.03	.01	Chemical Data Acquisition Plan (Sampling and Analysis Plan)
.03	.03	.01		Quality Assurance Project Plan	.01	.03	.01				Quality Assurance Project Plan
.03	.03	.02		Field Sampling Plan	.01	.03	.02				Field Sampling Plan
.03	.03			Sampling and Analysis Plan	.01	.03	.00				Sampling and Analysis Plan
.03	.03			Sampling and Analysis Plan				.01	.03	.01	Chemical Data Acquisition Plan (Sampling and Analysis Plan)
.03	.03			Sampling and Analysis Plan				.01	.03	.22	Sampling Plan
.03	.04			Health & Safety Plan	.01	.04					Site Health & Safety Plan
.03	.04			Health and Safety Plan				.01	.03	.08	Site Safety and Health Plan
.03	.05			Pollution Control and Mitigation Plan	.01	.05					Pollution Control and Mitigation Plan
.03	.05			Pollution Control and Mitigation Plan				.01	.03	.06	Pollution Control Plan
.03	.06			Data Management Plan	.01	.06					Data Management Plan
.03	.07			Community Relations Plan	.01	.07					Community Relations Plan
.03	.08			Transportation & Disposal Plan (Environmental Mgt. Plan)	.01	.08					Transportation & Disposal Plan (Waste Mgt. Plan)
.03	.08			Transportation and Disposal Plan (Waste Management Plan)				.01	.03	.15	Material Handling/Transportation/Disposal Plan
.03	.09			Management Plan	.01	.09					Site Management Plan
.03	.10			Risk Assessment Plan	.01	.10					Risk Assessment Plan
.03	.11	.01		Develop Conceptual Site Model	.01	.11	.01				Develop Conceptual Site Model
.03	.11	.02		ID of Data Needs & DQOs	.01	.11	.02				ID of Data Needs & DQOs
.03	.11	.03		ID of Prelim. RA Objectives & Potential Alternatives	.01	.11	.03				ID of Prelim. RA Objectives & Potential Alternatives
.03	.11	.04		ID of Treatability Studies	.01	.11	.04				ID of Treatability Studies
.03	.11	.05		Preliminary ID of ARARs of STDs	.01	.11	.05				Preliminary ID of ARARs of STDs
.03	.11	.06		ID of NEPA Requirements	.01	.11	.06				ID of NEPA Requirements
.03	.11	.07		ID of Other Regulatory Requirements	.01	.11	.07				ID of Other Regulatory Requirements
.03	.11			Technical Project Goals & Objectives	.01	.11	.00				Develop Technical Project Goals & Objectives
.03	.12	.01		Spill Control Plan				.01	.03	.02	Spill Control Plan
.03	.12	.02		Erosion Control Plan				.01	.03	.03	Erosion Control Plan
.03	.12	.03		Environmental Protection Plan				.01	.03	.04	Environmental Protection Plan
.03	.12	.04		Sediment Control Plan				.01	.03	.05	Sediment Control Plan
.03	.12	.05		Letter of Commitment				.01	.03	.07	Letter of Commitment
.03	.12	.06		Air Monitoring Plan				.01	.03	.09	Air Monitoring Plan
.03	.12	.07		Traffic Control Plan				.01	.03	.10	Traffic Control Plan
.03	.12	.08		Site Security Plan				.01	.03	.11	Site Security Plan
.03	.12	.09		Contaminated Water Storage and Treatment Plan				.01	.03	.12	Contaminated Water Storage and Treatment Plan
.03	.12	.10		General Site Work Plan				.01	.03	.13	General Site Work Plan
.03	.12	.11		Construction Quality Control Plan				.01	.03	.14	Construction Quality Control Plan
.03	.12	.12		Asbestos Hazard Abatement Plan				.01	.03	.16	Asbestos Hazard Abatement Plan
.03	.12	.13		Phase-Out Report				.01	.03	.17	Phase Out Report
.03	.12	.14		Accident Prevention Plan				.01	.03	.18	Accident Prevention Plan
.03	.12	.15		Phase Safety Plan				.01	.03	.19	Phase Safety Plan
.03	.12	.16		Trail Burn Plan				.01	.03	.21	Trail Burn Plan
.03	.12	.17		Property Equipment Plan				.01	.03	.23	Property Equipment Plan
.03	.12	.18		Location Survey and Mapping Plan				.01	.03	.25	Location Survey and Mapping Plan
.03	.12	.19		Work, Data, and Cost Management Plan				.01	.03	.26	Work, Data, & Cost Management Plan
.03	.12	.20		Chemical Accident or Incident Response and Assistance Plan				.01	.03	.27	Chemical Accident or Incident Response and Assistance Plan
.03	.12	.21		Performance and Compliance Monitoring Plan				.01	.03	.28	Performance and Compliance Monitoring Plan
.03	.12	.22		Site Safety Submission				.01	.03	.29	Site Safety Submission
.03	.12	.23		Other Technology Plans				.01	.03	.30	Other Technology Plans
.03	.12	.24		Experience Record				.01	.03	.31	Experience Record
.03	.12	.25		Financial Statement				.01	.03	.32	Financial Statement

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.03	.12	.26		Small Business Plan				.01	.03	.33	Small Business Plan
.03	.12	.27		Subcontracting Plan				.01	.03	.34	Subcontracting Plan
.03	.12	.28		Patent Fees				.01	.03	.39	Patent Fees
.03	.12			Implementation Plans				.01	.03		Submittals/Implementation Plans
.03	.13	.01		Engineering Evaluation & Cost Analyses	.01	.12	.01				Engineering Evaluation & Cost Analyses
.03	.13	.02		Action Memo Preparation	.01	.12	.02				Action Memo Preparation
.03	.13	.03		Removal Action Plans & Specs.	.01	.12	.03				Removal Action Plans & Specs.
.03	.13			Emergency Response Plans / Report / Approval	.01	.12	.00				Develop Emergency Response Plans/Report/Approval
.03	.13			Emergency Response Plans/Report/Approval				.01	.03	.20	Emergency Response Plan
.03	.14			Environmental Workplans	.01	.13					Develop Emergency Response Plans/Report/Approval
.03	.14			Environmental Workplans				.01	.03	.24	Operational Plan
.03	.15			Decommissioning Plan				.17	.01	.01	Preparation of Decommissioning Plan
.03	.15			Decommissioning Plan				.17	.05	.03	Considerations on Actual and Future Dismantling
.03	.15			Decommissioning Plan				.17	.05	.04	Decontamination Strategies/Techniques
.03	.16			Post RA/D&D Monitoring Plan							
.03	.17			Combined Workplan							
.03	.18			Proposed Plan							
.03	.19			RCRA Permit Preparation/Modification							
.03	.20			Environmental Action Implementation Plan							
.03	.21			Waste Site Work Permits							
.03	.22			Corrective Action Plan Reporting							
.03	.23			Material Disposition Plan							
.04	.00			STUDIES/DESIGN & DOCUMENTATION				.17	.01	.00	Pre-Decommissioning Operations
.04	.00			STUDIES/DESIGN & DOCUMENTATION	.12	.00					RISK ASSESSMENT
.04	.01			Hazardous, Toxic, and Radioactivity Ranking System	.12	.03					Document Risk (Hrs)
.04	.02	.01		Hazard Identification (Sources)	.12	.01	.01				Hazard Identification (Sources)
.04	.02	.02		Dose-response Assessment	.12	.01	.02				Dose-Response Assessment
.04	.02	.03		Prepare Conceptual Exposure/Pathway Analysis	.12	.01	.03				Prepare Conceptual Exp./Pathway Analysis
.04	.02	.04		Characterization of Site and Potential Receptors	.12	.01	.04				Characterization of Site and Potential Receptors
.04	.02	.05		Exposure Assessment	.12	.01	.05				Exposure Assessment
.04	.02	.06		Risk Characterization	.12	.01	.06				Risk Characterization
.04	.02	.07		Limitations / Uncertainties	.12	.01	.07				Limitations/Uncertainties
.04	.02	.08		Site Conceptual Model	.12	.01	.08				Site Conceptual Model
.04	.02			Human Health Risk Assessment	.12	.01	.00				Human Health Risk Assessment
.04	.03	.01		Hazard Identification (Sources)	.12	.02	.01				Hazard Identification (Sources)
.04	.03	.02		Dose-Response Assessment							
.04	.03	.03		Prepare Conceptual Exposure/Pathway Analysis	.12	.02	.02				Prepare Conceptual Exp./Pathway Analysis
.04	.03	.04		Characterization of Site and Potential Receptors	.12	.02	.03				Characterization of Site and Potential Receptors
.04	.03	.05		Select Chemicals, Indicator Species, & End Points	.12	.02	.04				Select Chemicals, Indicator Species, & End Points
.04	.03	.06		Exposure Assessment	.12	.02	.05				Exposure Assessment
.04	.03	.07		Toxicity Assessment / Ecological Effects Assessment	.12	.02	.06				Toxicity Assessment/Ecological Effects Assessment
.04	.03	.08		Risk Characterization	.12	.02	.07				Risk Characterization
.04	.03	.09		Limitations / Uncertainties	.12	.02	.08				Limitations/Uncertainties
.04	.03	.10		Site Conceptual Model	.12	.02	.09				Site Conceptual Model
.04	.03			Ecological Risk Assessment	.12	.02	.00				Ecological Risk Assessment
.04	.04	.01	.01	<i>Perform data compilation</i>	.13	.01	.01				Perform Data Compilation
.04	.04	.01	.02	<i>Present data (format tables & prepare graphics)</i>	.13	.01	.02				Present Data (Format Tables & Prepare Graphics)
.04	.04	.01	.03	<i>Site background</i>	.13	.01	.03				Site Background
.04	.04	.01	.04	<i>Investigation</i>	.13	.01	.04				Investigation
.04	.04	.01	.05	<i>Site characteristics</i>	.13	.01	.05				Site Characteristics
.04	.04	.01	.06	<i>Nature and extent of contamination</i>	.13	.01	.06				Nature and Extent of Contamination

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.04	.04	.01	.07	<i>Fate and transport</i>	.13	.01	.07				Fate and Transport
.04	.04	.01	.08	<i>Summary and conclusions</i>	.13	.01	.08				Summary and Conclusions
.04	.04	.01	.09	<i>Reproduction/distribution</i>	.13	.01	.09				Reproduction / Distribution
.04	.04	.02	.00	Respond to Comments	.13	.02					Respond to Comments
.04	.04	.03	.00	Finalize Report	.13	.03	.00				Finalize Report
.04	.04	.03	.01	<i>Reproduction/distribution</i>	.13	.03	.01				Reproduction / Distribution
.04	.04	.01		Compose Draft Reports	.13	.01	.00				Compose Draft Report(S)
.04	.04			Risk Assessment Documentation	.13	.00					DOCUMENT ASSESSMENT
.04	.05	.01		Site Background	.13	.01	.03				Site Background
.04	.05	.02	.00	Investigation	.13	.01	.04				Investigation
.04	.05	.02	.01	<i>Field investigation & technical approach</i>							
.04	.05	.02	.02	<i>Chemical analysis & analytical methods</i>							
.04	.05	.02	.03	<i>Field methodologies</i>							
.04	.05	.03	.00	Site Characteristics	.13	.01	.05				Site Characteristics
.04	.05	.03	.01	<i>Geology</i>							
.04	.05	.03	.02	<i>Hydrology</i>							
.04	.05	.03	.03	<i>Meteorology</i>							
.04	.05	.03	.04	<i>Demographics & land use</i>							
.04	.05	.03	.05	<i>Ecological assessment</i>							
.04	.05	.04	.00	Nature & Extent of Contamination	.13	.01	.06				Nature and Extent of Contamination
.04	.05	.04	.01	<i>Contaminant sources</i>							
.04	.05	.04	.02	<i>Contaminant distribution & trends</i>							
.04	.05	.05	.00	Fate & Transport	.13	.01	.07				Fate and Transport
.04	.05	.05	.01	<i>Contaminant characteristics</i>							
.04	.05	.05	.02	<i>Transport process</i>							
.04	.05	.05	.03	<i>Contaminant migration trends</i>							
.04	.05	.06	.00	Summary & Conclusions	.13	.01	.08				Summary and Conclusions
.04	.05			Remedial Investigation Report							
.04	.06	.01		Establish Remedial Action Objectives	.14	.01	.01				Establish Remedial Action Objectives
.04	.06	.02		Establish General Response Actions	.14	.01	.02				Establish General Response Actions
.04	.06	.03		ID Preliminary Alternatives	.14	.01	.03				ID Preliminary Alts
.04	.06	.04		Identify & Screen Applicable Remedial Technologies	.14	.01	.04				Identify & Screen Applicable Remedial Technologies
.04	.06	.05		Develop remedial Alternatives in Accordance with NCP							
.04	.06	.06		Identify Treatability Study Requirement	.14	.01	.05				Identify Treatability Study Requirement
.04	.06	.07		Assemble Technologies Into Actions	.14	.01	.06				Assemble Technologies into Actions
.04	.06	.08		Develop Conceptual Site Model	.14	.01	.07				Develop Conceptual Site Model
.04	.06			Develop Remedial Alternatives	.14	.00					ALTERNATIVE EVALUATION (RA / CM)
.04	.06			Develop Remedial Alternatives	.14	.01	.00				Develop Remedial Alternatives
.04	.07	.01		Screen Alternatives Base on Selected Criteria	.14	.02	.01				Screen Alts Based on Selected Criteria
.04	.07	.02		ID / Evaluate Action-Specific ARARs	.14	.02	.06				ID / Evaluate Action-Specific ARARS
.04	.07	.03		Refine List of Alternatives	.14	.02	.07				Refine List of Alternatives
.04	.07			Screen Remedial Alternatives	.14	.02	.00				Screen Remedial Alternatives
.04	.08	.01		Overall Protection of Human Health & Environment	.14	.03	.01				Overall Protection of Human Health & Environment
.04	.08	.02		Compliance with ARARs	.14	.03	.02				Compliance With ARARS
.04	.08	.03		Long-Term Effectiveness and Permanence	.14	.03	.03				Long-Term Effectiveness and Permanence
.04	.08	.04		Reduction in Toxicity, Mobility or Volume	.14	.03	.04				Reduction in Toxicity, Mobility or Volume
.04	.08	.05		Short-Term Effectiveness	.14	.03	.05				Short-Term Effectiveness
.04	.08	.06		Implementability - Technical And Administrative	.14	.03	.06				Implementability - Technical and Administrative
.04	.08	.07		Cost	.14	.03	.07				Cost
.04	.08	.08		State Acceptance	.14	.03	.08				State Acceptance
.04	.08	.09		Community Acceptance	.14	.03	.09				Community Acceptance

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.04	.08			Evaluate Alternatives	.14	.03	.00				Evaluate Alternatives
.04	.09	.01		Priority Model Scoring	.14	.04	.01				Priority Model Scoring
.04	.09	.02		Selection of Remedy / Documentation	.14	.04	.02				Selection of Remedy / Documentation
.04	.09			Refinement of Alternatives	.14	.04	.00				Refinement of Alternatives
.04	.10	.01	.00	Compose Draft FS (CMS) Report	.16	.01	.00				Compose Draft FS (CMS) Report
.04	.10	.01	.01	Perform data compilation	.16	.01	.01				Perform Data Compilation
.04	.10	.01	.02	Present data (format tables & prepare graphics)	.16	.01	.02				Present Data (Format Tables & Prepare Graphics)
.04	.10	.01	.03	Feasibility study objectives	.16	.01	.03				Feasibility Study Objectives
.04	.10	.01	.04	Remedial objectives	.16	.01	.04				Remedial Objectives
.04	.10	.01	.05	General response actions	.16	.01	.05				General Response Actions
.04	.10	.01	.06	ID and screening of remedial technologies	.16	.01	.06				ID and Screening of Remedial Technologies
.04	.10	.01	.07	Remedial alternatives description	.16	.01	.07				Remedial Alternatives Description
.04	.10	.01	.08	Detailed analysis of remedial technologies	.16	.01	.08				Detailed Analysis of Remedial Alternatives
.04	.10	.01	.09	Develop engineering cost analysis of selected alternative	.16	.01	.09				Develop Engineering Cost Analysis of Selected Alt
.04	.10	.01	.10	Summary and conclusions	.16	.01	.10				Summary and Conclusions
.04	.10	.01	.11	Reproduction/distribution	.16	.01	.11				Reproduction / Distribution
.04	.10	.02		Respond to Comments	.16	.02					Respond to Comments
.04	.10	.03	.01	Reproduction / distribution	.16	.03	.01				Reproduction / Distribution
.04	.10	.03		Finalize Report	.16	.03	.00				Finalize Report
.04	.10	.04		Prepare Feasibility Study Addendum	.17	.04					Prepare Feasibility Study Addendum
.04	.10			Document Feasibility Study (FS or RCRA - CMS)	.16	.00					DOCUMENT FS (CMS)
.04	.11	.01	.01	Recommend project delivery strategy and scheduling	.20	.01	.01				Recommend Project Delivery Strategy and Schedule
.04	.11	.01	.02	Prepare preliminary construction schedule	.20	.01	.02				Prepare Preliminary Construction Schedule
.04	.11	.01	.03	Prepare specifications outline	.20	.01	.03				Prepare Specifications Outline
.04	.11	.01	.04	Prepare preliminary drawings	.20	.01	.04				Prepare Preliminary Drawings
.04	.11	.01	.05	Prepare basis of design report/design analysis	.20	.01	.05				Prepare Basis of Design Report/Design Analysis
.04	.11	.01	.06	Prepare preliminary cost estimate	.20	.01	.06				Prepare Preliminary Cost Estimate
.04	.11	.01		Preliminary Design	.20	.01	.00				Preliminary Design
.04	.11	.02	.01	Update construction schedule	.20	.02	.01				Update Construction Schedule
.04	.11	.02	.02	Prepare preliminary specifications	.20	.02	.02				Prepare Preliminary Specifications
.04	.11	.02	.03	Prepare intermediate drawings	.20	.02	.03				Prepare Intermediate Drawings
.04	.11	.02	.04	Prepare basis of design report/design analysis	.20	.02	.04				Prepare Basis of Design Report/Design Analysis
.04	.11	.02	.05	Prepare revised cost estimate	.20	.02	.05				Prepare Revised Cost Estimate
.04	.11	.02	.06	Participate in intermediate design review/briefing	.20	.02	.06				Participate in Intermediate Design Review/Briefing
.04	.11	.02		Intermediate Design	.20	.02	.00				Intermediate Design
.04	.11	.03	.01	Prepare pre-final design specifications	.20	.03	.01				Prepare Pre-Final Design Specifications
.04	.11	.03	.02	Prepare pre-final drawings	.20	.03	.02				Prepare Pre-Final Drawings
.04	.11	.03	.03	Prepare basis of design report/design analysis	.20	.03	.03				Prepare Basis of Design Report/Design Analysis
.04	.11	.03	.04	Prepare revised cost estimate	.20	.03	.04				Prepare Revised Cost Estimate
.04	.11	.03	.05	Participate in pre-final/final design review	.20	.03	.05				Participate In Pre-Final/Final Design Review
.04	.11	.03	.06	Prepare 100% design submittal	.20	.03	.06				Prepare 100% Design Submittal
.04	.11	.03		Pre-Final / Final Design	.20	.03	.00				Pre-Final / Final Design
.04	.11			Environmental Restoration Project Design	.20	.00					DESIGN PREPARATION (6% Limit)
.04	.12	.01	.01	Recommend project delivery strategy and scheduling							
.04	.12	.01	.02	Prepare preliminary construction schedule							
.04	.12	.01	.03	Prepare specifications outline							
.04	.12	.01	.04	Prepare preliminary drawings							
.04	.12	.01	.05	Prepare basis of design report/design analysis							
.04	.12	.01	.06	Prepare preliminary cost estimate							
.04	.12	.01		Preliminary Design							
.04	.12	.02	.01	Update construction schedule							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.04	.12	.02	.02	<i>Prepare preliminary specifications</i>							
.04	.12	.02	.03	<i>Prepare intermediate drawings</i>							
.04	.12	.02	.04	<i>Prepare basis of Design report/design analysis</i>							
.04	.12	.02	.05	<i>Prepare revised cost estimate</i>							
.04	.12	.02	.06	<i>Participate in intermediate design review/briefing</i>							
.04	.12	.02		Intermediate Design							
.04	.12	.03	.00	Pre-Final / Final Design							
.04	.12	.03	.01	<i>Prepare pre-final design specifications</i>							
.04	.12	.03	.02	<i>Prepare pre-final drawings</i>							
.04	.12	.03	.03	<i>Prepare basis of design report/design analysis</i>							
.04	.12	.03	.04	<i>Prepare revised cost estimate</i>							
.04	.12	.03	.05	<i>Participate in pre-final/final design review</i>							
.04	.12	.03	.06	<i>Prepare 100% design submittal</i>							
.04	.12			Decontamination/Dismantlement Project Design							
.04	.13	.01	.01	<i>Recommend project delivery strategy and scheduling</i>							
.04	.13	.01	.02	<i>Prepare preliminary construction schedule</i>							
.04	.13	.01	.03	<i>Prepare specifications outline</i>							
.04	.13	.01	.04	<i>Prepare preliminary drawings</i>							
.04	.13	.01	.05	<i>Prepare basis of design report/design analysis</i>							
.04	.13	.01	.06	<i>Prepare preliminary cost estimate</i>							
.04	.13	.01		Preliminary Design							
.04	.13	.02	.01	<i>Update construction schedule</i>							
.04	.13	.02	.02	<i>Prepare preliminary specifications</i>							
.04	.13	.02	.03	<i>Prepare intermediate drawings</i>							
.04	.13	.02	.04	<i>Prepare basis of design report/design analysis</i>							
.04	.13	.02	.05	<i>Prepare revised cost estimate</i>							
.04	.13	.02	.06	<i>Participate in intermediate design review/briefing</i>							
.04	.13	.02		Intermediate Design							
.04	.13	.03	.01	<i>Prepare pre-final design specifications</i>							
.04	.13	.03	.02	<i>Prepare pre-final drawings</i>							
.04	.13	.03	.03	<i>Prepare basis of design report/design analysis</i>							
.04	.13	.03	.04	<i>Prepare revised cost estimate</i>							
.04	.13	.03	.05	<i>Participate in pre-final/final design review</i>							
.04	.13	.03	.06	<i>Prepare 100% design submittal</i>							
.04	.13	.03		Pre-Final / Final Design							
.04	.13			Facility Design							
.04	.14	.01		Perform VE Screening	.21	.01					Perform VE Screening
.04	.14	.02		Perform Value Engineering Study	.21	.02					Perform Value Engineering Study
.04	.14	.03		Document VE Study Results	.21	.03					Document VE Study Results
.04	.14	.04	.01	<i>Provide technical support in land acquisition</i>	.21	.04	.01				Provide Technical Support in Land Acquisition
.04	.14	.04		Develop Land Acquisition / Easement Requirements	.21	.04	.00				Develop Land Acquisition/Easement Requirements
.04	.14	.05		Participate in Biddability / Constructability Reviews	.21	.05					Participate in Biddability/Constructability Reviews
.04	.14			Value Engineering/Special Studies	.21	.00					VALUE ENGINEERING / SPECIAL STUDIES
.04	.15			Combined Report							
.04	.16			Engineering Evaluation/Cost Analysis							
.04	.17			Record of Decision							
.04	.18			Combined Feasibility Document							
.04	.19			Post Construction Design Report							
.04	.20			Task Requirement and Criteria							
.04	.21	.01		Punch List				.21	.06	.01	Punch List
.04	.21	.02		Project Acceptance				.21	.06	.02	Project Acceptance

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.04	.21	.03		Survey Information				.21	.06	.03	Survey Information
.04	.21	.04		Final QA/QC Report				.21	.06	.04	Final QA/QC Report
.04	.21	.05		As-Built Drawings				.21	.06	.06	As-Built Drawings
.04	.21	.9x		Others				.21	.06	.09	O&M Manuals
.04	.21			Submittals				.21	.06		Submittals
.05	.00			SITE WORK	.07	.00					SITE WORK / TEMPORARY FACILITIES
.05	.00			SITE WORK				.03	.00		SITE WORK
.05	.00			SITE WORK				.20	.00		SITE RESTORATION
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.01	.01	.01	Transport Vehicles Ownership/Operation
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.01	.01	.02	Driver
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.01	.01	.08	Equipment Operators
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.21	.04	.01	Transport Vehicles Ownership/Operation
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.21	.04	.02	Driver
.05	.01	.01	.01	<i>Transport vehicles, equipment, drivers and operators</i>				.21	.04	.08	Equipment Operators
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.01	.01	.03	Manifest
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.01	.01	.04	Tolls
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.01	.01	.05	Permits
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.21	.04	.03	Manifest
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.21	.04	.04	Tolls
.05	.01	.01	.02	<i>Manifests, tolls, permits for mobilization</i>				.21	.04	.05	Permits
.05	.01	.01	.03	<i>Escort vehicles ownership and operation</i>				.01	.01	.06	Escort Vehicles Ownership and Operation
.05	.01	.01	.03	<i>Escort vehicles ownership and operation</i>				.21	.04	.06	Escort Vehicles Ownership and Operation
.05	.01	.01	.04	<i>Construction equipment operators</i>				.01	.01	.07	Construction Equipment Ownership/Operation
.05	.01	.01	.04	<i>Construction equipment operators</i>				.21	.04	.07	Construction Equipment Ownership/Operation
.05	.01	.01	.05	<i>Setup and assembly of equipment for operations</i>				.01	.01	.09	Initial Assembly and Setup
.05	.01	.01	.05	<i>Setup and assembly of equipment for operations</i>				.21	.04	.09	Initial Assembly and Setup
.05	.01	.01		Mobilization of Construction Equipment & Facilities				.01	.01		Mobilization of Construction Equipment and Facilities
.05	.01	.01		Mobilization of Construction Equipment & Facilities							
.05	.01	.02	.01	<i>Relocation of supervisory personnel</i>				.01	.02	.01	Relocation of Supervisory Personnel
.05	.01	.02		Mobilization of Personnel				.01	.02		Mobilization of Personnel
.05	.01	.02		Mobilization of Personnel							
.05	.01	.03	.01	<i>Office trailers</i>				.01	.04	.01	Office Trailers
.05	.01	.03	.01	<i>Office trailers</i>				.21	.01	.01	Office Trailers
.05	.01	.03	.02	<i>Lunch/break trailer</i>				.01	.04	.07	Lunch/Break Trailer
.05	.01	.03	.02	<i>Lunch/break trailer</i>				.21	.01	.07	Lunch/Break Trailer
.05	.01	.03	.03	<i>Emergency medical facilities trailers</i>				.01	.04	.09	Emergency Medical Trailer/Facilities
.05	.01	.03	.03	<i>Emergency medical facilities trailers</i>				.21	.01	.08	Emergency Medical Trailer/Facilities
.05	.01	.03	.04	<i>Storage facilities and warehouses</i>				.01	.04	.02	Storage Facility
.05	.01	.03	.04	<i>Storage facilities and warehouses</i>				.01	.04	.13	Warehouse
.05	.01	.03	.04	<i>Storage facilities and warehouses</i>				.21	.01	.02	Storage Facility
.05	.01	.03	.04	<i>Storage facilities and warehouses</i>				.21	.01	.13	Warehouse
.05	.01	.03	.05	<i>Laundry facilities</i>				.01	.04	.08	Laundry Facilities
.05	.01	.03	.05	<i>Laundry facilities</i>				.21	.01	.09	Laundry Facilities
.05	.01	.03	.06	<i>Toilets</i>				.01	.04	.10	Toilet
.05	.01	.03	.06	<i>Toilets</i>				.21	.01	.10	Toilet
.05	.01	.03	.07	<i>Temporary laboratory</i>	.07	.17					Construct Temporary/Mobile Laboratory
.05	.01	.03	.07	<i>Temporary laboratory</i>				.01	.04	.20	Photographic Laboratory
.05	.01	.03	.07	<i>Temporary laboratory</i>				.21	.01	.20	Photographic Laboratory
.05	.01	.03	.08	<i>Maintenance shop</i>				.01	.04	.12	Equipment Maintenance Shop
.05	.01	.03	.08	<i>Maintenance shop</i>				.01	.04	.22	Shop Facility
.05	.01	.03	.08	<i>Maintenance shop</i>				.21	.01	.12	Equipment Maintenance Shop

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
					2nd	3rd	4th	2nd	3rd	4th	
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE							
.05	.01	.03	.08	Maintenance shop				.21	.01	.22	Shop Facility
.05	.01	.03	.09	Truck scales				.01	.04	.16	Truck Scales
.05	.01	.03	.09	Truck scales				.21	.01	.16	Truck Scales
.05	.01	.03	.10	Observation towers				.01	.04	.03	Observation Tower
.05	.01	.03	.10	Observation towers				.21	.01	.03	Observation Tower
.05	.01	.03	.11	Decontamination facilities for personnel	.07	.14					Construct Temporary Decontamination Facility
.05	.01	.03	.11	Decontamination facilities for personnel				.01	.04	.04	Decontamination Facility for Personnel
.05	.01	.03	.11	Decontamination facilities for personnel				.21	.01	.04	Decontamination Facility for Personnel
.05	.01	.03	.12	Decontamination facilities for construction equipment and vehicles	.07	.14					Construct Temporary Decontamination Facility
.05	.01	.03	.12	Decontamination facilities for construction equipment and vehicles				.01	.04	.05	Decontamination Facility for Equipment and Vehicles
.05	.01	.03	.12	Decontamination facilities for construction equipment and vehicles				.21	.01	.05	Decontamination Facility for Equipment and Vehicles
.05	.01	.03	.13	Temporary cover structure over contaminated area	.07	.12					Provide Cover Structure over Contaminated Area
.05	.01	.03	.13	Temporary cover structure over contaminated area				.01	.04	.06	Temporary Cover Structure Over Contaminated Area
.05	.01	.03	.13	Temporary cover structure over contaminated area				.21	.01	.06	Temporary Cover Structure Over Contaminated Area
.05	.01	.03	.14	Barricades				.01	.04	.11	Barricades
.05	.01	.03	.14	Barricades				.21	.01	.11	Barricades
.05	.01	.03	.15	Fire suppression systems				.01	.04	.18	Fire Suppression Systems
.05	.01	.03	.15	Fire suppression systems				.21	.01	.18	Fire Suppression Systems
.05	.01	.03	.16	POL dispensing station				.01	.04	.19	POL Dispensing Station
.05	.01	.03	.16	POL dispensing station				.21	.01	.19	POL Dispensing Station
.05	.01	.03	.17	Guard houses				.01	.04	.15	Guard Houses
.05	.01	.03	.17	Guard houses				.21	.01	.15	Guard Houses
.05	.01	.03	.18	Wastewater holding tanks				.01	.04	.17	Wastewater Holding Tanks
.05	.01	.03	.18	Wastewater holding tanks				.21	.01	.17	Wastewater Holding Tanks
.05	.01	.03	.19	Housing				.01	.04	.21	Housing
.05	.01	.03	.19	Housing				.21	.01	.21	Housing
.05	.01	.03	.20	Aggregate surfacing				.01	.04	.23	Aggregate Surfacing
.05	.01	.03	.20	Aggregate surfacing				.21	.01	.23	Aggregate Surfacing
.05	.01	.03	.21	Security fencing				.01	.04	.24	Security Fencing
.05	.01	.03	.21	Security fencing				.21	.01	.24	Security Fencing
.05	.01	.03	.22	Roads and parking				.01	.04	.25	Roads and Parking
.05	.01	.03	.22	Roads and parking				.21	.01	.25	Roads and Parking
.05	.01	.03	.23	Culverts				.01	.04	.26	Culverts
.05	.01	.03	.23	Culverts				.21	.01	.26	Culverts
.05	.01	.03	.24	Walks				.01	.04	.27	Walks
.05	.01	.03	.24	Walks				.21	.01	.27	Walks
.05	.01	.03	.25	Signs				.01	.04	.28	Signs
.05	.01	.03	.25	Signs				.21	.01	.28	Signs
.05	.01	.03	.26	Grading				.01	.04	.29	Grading
.05	.01	.03	.26	Grading				.21	.01	.29	Grading
.05	.01	.03	.27	Erosion control				.01	.04	.30	Erosion Control
.05	.01	.03	.27	Erosion control				.21	.01	.30	Erosion Control
.05	.01	.03	.9x	Others	.07	.16					Construct Other Temporary Facilities
.05	.01	.03		Setup / Construct Temporary Facilities				.01	.04		Setup/Construct Temporary Facilities
.05	.01	.04	.01	Site lighting				.01	.05	.01	Site Lighting
.05	.01	.04	.01	Site lighting				.21	.02	.01	Site Lighting
.05	.01	.04	.02	Power connection/distribution				.01	.05	.02	Power Connection/Distribution
.05	.01	.04	.02	Power connection/distribution				.21	.02	.02	Power Connection/Distribution
.05	.01	.04	.03	Telephone/communications hook-up				.01	.05	.03	Telephone/Communication Distribution
.05	.01	.04	.03	Telephone/communications hook-up				.21	.02	.03	Telephone/Communication Distribution
.05	.01	.04	.04	Water connection/distribution				.01	.05	.04	Water Connection/Distribution

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.05	.01	.04	.04	Water connection/distribution				.21	.02	.04	Water Connection/Distribution
.05	.01	.04	.05	Sewer connection/distribution				.01	.05	.05	Sewer Connection/Distribution
.05	.01	.04	.05	Sewer connection/distribution				.21	.02	.05	Sewer Connection/Distribution
.05	.01	.04	.06	Gas connection/distribution				.01	.05	.06	Gas Connection/Distribution
.05	.01	.04	.06	Gas connection/distribution				.21	.02	.06	Gas Connection/Distribution
.05	.01	.04		Temporary Utilities				.01	.05		Construct Temporary Utilities
.05	.01	.04		Temporary Utilities							
.05	.01	.05	.01	Concrete batch				.01	.07	.01	Concrete batch
.05	.01	.05	.01	Concrete batch				.21	.07	.01	Concrete batch
.05	.01	.05	.02	Block				.01	.07	.02	Block
.05	.01	.05	.02	Block				.21	.07	.02	Block
.05	.01	.05	.03	Precast				.01	.07	.03	Precast
.05	.01	.05	.03	Precast				.21	.07	.03	Precast
.05	.01	.05	.04	Asphalt				.01	.07	.04	Asphalt
.05	.01	.05	.04	Asphalt				.21	.07	.04	Asphalt
.05	.01	.05	.05	Quarry crusher/screens				.01	.07	.05	Quarry crusher/screens
.05	.01	.05	.05	Quarry crusher/screens				.21	.07	.05	Quarry crusher/screens
.05	.01	.05		Construct Plant Erection				.01	.07		Construction Plant Erection
.05	.01	.05		Construct Plant Erection							
.05	.01	.06		Radiological Protection Laboratory							
.05	.01	.07	.01	Roads				.01	.06	.01	Roads
.05	.01	.07	.02	Structures				.01	.06	.02	Structures
.05	.01	.07	.03	Utilities				.01	.06	.03	Utilities
.05	.01	.07		Temporary Relocations/Roads/Structures/Utilities				.01	.06		Temporary Relocation/Roads/Structures/Utilities
.05	.01			Mobilization	.07	.01					Perform Mobilization/Demobilization
.05	.01			Mobilization	.06	.02					Perform Mobilization/Demobilization
.05	.01			Mobilization				.01	.00		MOBILIZATION AND PREPARATORY WORK
.05	.02	.01		Removal of Trash and Debris							
.05	.02	.02		Washing or Sweeping							
.05	.02	.03		Fine Grading and Soil Preparation							
.05	.02	.04		Erosion Control							
.05	.02	.05		Sodding and Seeding							
.05	.02	.06		Planting of Trees, Shrubs, Plants							
.05	.02	.07		Revegetation							
.05	.02	.08		Irrigation System							
.05	.02	.09		Topsoil				.03	.03	.14	Topsoil
.05	.02	.10		Mulch/Fertilizer							
.05	.02			Cleanup / Landscaping / Revegetation	.07	.18					Site Restoration
.05	.02			Cleanup / Landscaping / Revegetation				.20	.04		Revegetation and Planting
.05	.03	.01		Cut and Chip Trees							
.05	.03	.02		Removal of Stumps							
.05	.03	.03		Clearing Brush							
.05	.03	.04		Strip Topsoil				.03	.03	.16	Stripping
.05	.03	.04		Strip Topsoil							
.05	.03	.05		Tree Removal							
.05	.03			Clear & Grub	.07	.02					Clear & Grub
.05	.03			Clear & Grub				.03	.02		Clearing and Grubbing
.05	.04	.01	.01	Office space structures							
.05	.04	.01	.02	Laboratory space/research space structures							
.05	.04	.01	.03	Storage or warehouse structures							
.05	.04	.01	.04	Treatment facility structure							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.05	.04	.01	.05	Component cooling systems							
.05	.04	.01	.06	Make-up water systems							
.05	.04	.01	.07	Feedwater systems							
.05	.04	.01	.08	Condenser cooling systems							
.05	.04	.01	.09	Sampling systems							
.05	.04	.01	.10	Turbine generator							
.05	.04	.01	.11	Electrical MCCs							
.05	.04	.01	.12	Instrumentation systems							
.05	.04	.01	.13	Cable trays and conduits							
.05	.04	.01	.14	Compressed air systems							
.05	.04	.01	.15	Instrument air systems							
.05	.04	.01	.16	Security systems							
.05	.04	.01	.17	Fire protection systems							
.05	.04	.01	.18	HVAC							
.05	.04	.01	.19	Security fencing							
.05	.04	.01	.20	Cooling towers and stacks							
.05	.04	.01	.21	Roads and parking space							
.05	.04	.01	.22	Rail roads							
.05	.04	.01	.23	Security building structures							
.05	.04	.01		Dismantling or Demolition of Non-Usable, Clean Balance of Plant Systems							
.05	.04			Dismantling and Demolition				.03	.01		Demolition
.05	.05	.01		Excavation of soils, rocks, solids and sludges				.03	.03	.01	Rock Excavation
.05	.05	.01		Excavation of soils, rocks, solids and sludges				.03	.03	.02	Excavation/Fill
.05	.05	.02		Scarification				.03	.03	.09	Scarification
.05	.05	.03		Harrowing and furrowing				.03	.03	.10	Harrowing
.05	.05	.03		Harrowing and furrowing				.03	.03	.12	Contour Furrowing
.05	.05	.04		Tracking				.03	.03	.11	Tracking
.05	.05	.05		Grading				.03	.03	.07	Grading
.05	.05	.06		Backfilling				.03	.03	.03	Backfill
.05	.05	.07		Spreading				.03	.03	.06	Spreading
.05	.05	.08		Compaction				.03	.03	.08	Compaction
.05	.05	.09		Stockpiling				.03	.03	.13	Stockpiling
.05	.05	.10		Settlement markers				.03	.03	.15	Settlement Markers
.05	.05			Excavation/Earthwork	.07	.03					Perform Earthwork
.05	.05			Excavation/Earthwork				.03	.03		Earthwork
.05	.05			Excavation/Earthwork				.05	.12		Earthwork
.05	.05			Excavation/Earthwork				.20	.01		Earthwork
.05	.06			Load & Haul							
.05	.06			Load and Haul				.03	.03	.04	Borrow
.05	.07			Borrow Pit / Haul Roads	.07	.13					Borrow Pit / Haul Roads
.05	.07			Borrow Pit / Haul Roads				.03	.13		Development of Borrow Pit/Haul Roads
.05	.07			Borrow Pit / Haul Roads				.05	.14		Development of Borrow Pit/Haul Roads
.05	.07			Borrow Pit / Haul Roads				.06	.09		Development of Borrow Pit/Haul Roads
.05	.07			Borrow Pit / Haul Roads				.08	.07		Development of Borrow Pit/Haul Roads
.05	.07			Borrow Pit / Haul Roads				.09	.08		Development of Borrow Pit/Haul Roads
.05	.07			Borrow Pit/Haul Roads				.03	.03	.05	Hauling
.05	.08			Access Roads	.07	.04					Build roads/Parking/Curbs/Walks
.05	.08			Access Roads				.03	.04		Roads/Parking/Curbs/Walks
.05	.09			Arterial Roads / Divided Highways							
.05	.10			Re-striping Roadways / Parking Lots							
.05	.10			Diesel Generator							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.05	.11			Resurfacing Roadways / Parking Lots							
.05	.11			Access Control Facility							
.05	.12			Railroad Tracks & Crossings							
.05	.13			Bridges							
.05	.14			Fencing	.07	.05					Install Fencing
.05	.14			Fencing				.03	.05		Fencing
.05	.15			Parking Lots	.07	.04					Build roads/Parking/Curbs/Walks
.05	.15			Parking Lots				.03	.04		Roads/Parking/Curbs/Walks
.05	.16			Retaining Wall							
.05	.17			Sidewalks	.07	.04					Build roads/Parking/Curbs/Walks
.05	.17			Sidewalks				.03	.04		Roads/Parking/Curbs/Walks
.05	.18			Sprinkler System							
.05	.20			Gas Distribution	.07	.08					Install/Water/Sewer/Gas Distribution
.05	.20			Gas Distribution				.03	.08		Water/Sewer/Gas Distribution
.05	.21			Fuel Line Distribution	.07	.10					Install Fuel Line Distribution
.05	.21			Fuel Line Distribution				.03	.10		Fuel Line Distribution
.05	.22			Fuel Storage Tanks				.03	.14		Fuel Storage Tanks (New)
.05	.23			Heating / Cooling Distribution System							
.05	.24			Steam and Condensate Distribution	.07	.09					Install Steam and Condensate Distribution
.05	.24			Steam and Condensate Distribution				.03	.09		Steam and Condensate Distribution
.05	.25			Treatment Plants / Lift Stations							
.05	.26			Water Distribution	.07	.08					Install/Water/Sewer/Gas Distribution
.05	.26			Water Distribution				.01	.09		Alternate Water Supply
.05	.26			Water Distribution				.03	.08		Water/Sewer/Gas Distribution
.05	.27			Water Storage Tanks							
.05	.28			Storm Sewer	.07	.11					Install Storm Drainage/Subdrainage
.05	.28			Storm Sewer				.03	.08		Water/Sewer/Gas Distribution
.05	.28			Storm Sewer				.03	.11		Storm Drainage/Subdrainage
.05	.29			Communications	.07	.07					Install Telephone/Communication Distribution
.05	.29			Communications				.03	.07		Telephone/Communication Distribution
.05	.30			Lighting							
.05	.31			Overhead Electrical Distribution	.07	.06					Install Electrical Distribution
.05	.31			Overhead Electrical Distribution				.03	.06		Electrical Distribution
.05	.32			Underground Electrical Distribution	.07	.06					Install Electrical Distribution
.05	.32			Underground Electrical Distribution				.03	.06		Electrical Distribution
.05	.33			Sanitary Sewer	.07	.08					Install/Water/Sewer/Gas Distribution
.05	.34			Restoration of Buildings after D&D							
.05	.35			Compressed Air/Nitrogen							
.05	.36	.01	.01	Office trailers							
.05	.36	.01	.02	Lunch/break trailer							
.05	.36	.01	.03	Emergency medical facilities trailers							
.05	.36	.01	.04	Storage facilities							
.05	.36	.01	.05	Laundry facilities							
.05	.36	.01	.06	Toilets							
.05	.36	.01	.07	Temporary laboratory							
.05	.36	.01	.08	Maintenance shop							
.05	.36	.01	.09	Truck scales							
.05	.36	.01	.10	Observation towers							
.05	.36	.01	.11	Decontamination facilities for personnel							
.05	.36	.01	.12	Decontamination facilities for construction equipment and vehicles							
.05	.36	.01	.13	Temporary cover structure over contaminated area							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.05	.36	.01	.14	<i>Barricades</i>							
.05	.36	.01	.15	<i>Fire suppression systems</i>							
.05	.36	.01	.16	<i>POL dispensing station</i>							
.05	.36	.01	.17	<i>Guard houses</i>							
.05	.36	.01	.18	<i>Wastewater holding tanks</i>							
.05	.36	.01	.19	<i>Housing</i>							
.05	.36	.01	.20	<i>Aggregate surfacing</i>							
.05	.36	.01	.21	<i>Security fencing</i>							
.05	.36	.01	.22	<i>Roads and parking</i>							
.05	.36	.01	.23	<i>Culverts</i>							
.05	.36	.01	.24	<i>Walks</i>							
.05	.36	.01	.25	<i>Signs</i>							
.05	.36	.01	.26	<i>Grading</i>							
.05	.36	.01	.27	<i>Erosion control</i>							
.05	.36	.01		Removal of Temporary Facilities				.20	.05		Removal of Barriers
.05	.36	.01		Removal of Temporary Facilities				.21	.01		Removal of Temporary Facilities
.05	.36	.02	.01	<i>Site lighting</i>							
.05	.36	.02	.02	<i>Power connection/distribution</i>							
.05	.36	.02	.03	<i>Telephone/communications hook-up</i>							
.05	.36	.02	.04	<i>Water connection/distribution</i>							
.05	.36	.02	.05	<i>Sewer connection/distribution</i>							
.05	.36	.02	.06	<i>Gas connection/distribution</i>							
.05	.36	.02		Removal of Temporary Utilities				.21	.02		Removal of Temporary Utilities
.05	.36	.03		Final Decontamination				.21	.03		Final Decontamination
.05	.36	.04	.01	<i>Transport vehicles, equipment, drivers and operators</i>							
.05	.36	.04	.02	<i>Manifests, tolls, permits for mobilization</i>							
.05	.36	.04	.03	<i>Escort vehicles ownership and operation</i>							
.05	.36	.04	.04	<i>Construction equipment operators</i>							
.05	.36	.04	.05	<i>Disassembly of equipment and takedown</i>							
.05	.36	.04	.06	<i>Turn in OFE</i>							
.05	.36	.04		Demobilization Construction Equipment and Facilities				.21	.04		Demobilization of Construction Equipment and Facilities
.05	.36	.05		Demobilization of Personnel				.21	.05		Demobilization of Personnel
.05	.36	.06		Construction Plant Takedown				.21	.07		Construction Plant Takedown
.05	.36	.07		Radiological Protection Laboratory							
.05	.36			Demobilization	.06	.02					Perform Mobilization/Demobilization
.05	.36			Demobilization	.07	.01					Perform Mobilization/Demobilization
.05	.36			Demobilization				.21	.00		DEMOBILIZATION
.05	.37			Population Relocation				.01	.10		Population Relocation
.05	.39			Steam Plant Facility							
.05	.40			Switch Gear Building							
.05	.41			Important-to-Safety Switch Gear Building							
.05	.51	.01		Mobilization	.07	.01					Perform Mobilization/Demobilization
.05	.51	.02		Demobilization	.07	.01					Perform Mobilization/Demobilization
.05	.51	.03		Temporary Construction of Roads, Walks, Fences				.01	.04		Setup/Construct Temporary Facilities
.05	.51	.03		Temporary Construction of Roads, Walks, Fences							
.05	.51			General Requirements				.01	.00		MOBILIZATION AND PREPARATORY WORK
.05	.52	.01		Landscaping	.07	.18					Site Restoration
.05	.52	.01		Landscaping				.20	.04		Revegetation and Planting
.05	.52	.01		Landscaping							
.05	.52	.02		Site Clearing and Grubbing	.07	.02					Clear & Grub
.05	.52	.02		Site clearing and grubbing				.03	.02		Clearing and Grubbing

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.05	.52	.02		Site Clearing and Grubbing							
.05	.52	.03		Dismantle							
.05	.52	.04		Excavation	.07	.03					Perform Earthwork
.05	.52	.04		Excavation				.03	.03		Earthwork
.05	.52	.04		Excavation				.20	.01		Earthwork
.05	.52	.05		Loading/Hauling and Dumping							
.05	.52	.06		Permanent Rock and Gravel Roads	.07	.04					Build roads/Parking/Curbs/Walks
.05	.52	.06		Permanent Rock and Gravel Roads				.03	.04		Roads/Parking/Curbs/Walks
.05	.52	.07		Permanent Bituminous Paving	.07	.04					Build roads/Parking/Curbs/Walks
.05	.52	.07		Permanent Bituminous Paving				.03	.04		Roads/Parking/Curbs/Walks
.05	.52	.08		Railroads							
.05	.52	.09		Bridges							
.05	.52	.10		Permanent Fences							
.05	.52	.11		Permanent Road, Walks, and Parking	.07	.04					Build roads/Parking/Curbs/Walks
.05	.52	.11		Permanent Road, Walks, and Parking				.03	.04		Roads/Parking/Curbs/Walks
.05	.52	.12		Retaining Wall							
.05	.52	.13		Bituminous Sidewalks	.07	.04					Build roads/Parking/Curbs/Walks
.05	.52	.13		Bituminous Sidewalks				.03	.04		Roads/Parking/Curbs/Walks
.05	.52	.14		Sprinkler System							
.05	.52	.15		Culverts							
.05	.52	.16		Special Pipe Installation							
.05	.52	.17		Drainage and Utilities							
.05	.52	.18		Sewer Line							
.05	.52			Clean Site Work							
.05	.53			Concrete							
.05	.54			Masonry							
.05	.55			Metals							
.05	.56			Wood & Plastics							
.05	.57			Thermal and Moisture Protection							
.05	.58			Doors and Windows							
.05	.59			Finishes							
.05	.60			Specialties							
.05	.61			Equipment							
.05	.62			Furnishings							
.05	.63	.01		Tanks							
.05	.63			Special Construction							
.05	.64			Conveying Systems							
.05	.65	.01		Heaters and Exchangers							
.05	.65	.02		Special Pipe Installation							
.05	.65	.03		Pumps and Drivers							
.05	.65	.04		Compressors, Blower, Fans, and Drivers							
.05	.65			Mechanical							
.05	.66	.01		Communication Devices	.07	.07					Install Telephone/Communication Distribution
.05	.66	.01		Communication Devices				.03	.07		Telephone/Communication Distribution
.05	.66	.02		Lighting Fixtures							
.05	.66	.03		Power Transmission and Distribution	.07	.06					Install Electrical Distribution
.05	.66	.03		Power Transmission and Distribution				.03	.06		Electrical Distribution
.05	.66	.04		Electric Utilities							
.05	.66	.05		Instrumentation and Controls							
.05	.66			Electrical							
.06	.00			PRE-REMEDIAL SURVEILLANCE & MAINTENANCE							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.06	.01	.01		Develop End Point Criteria							
.06	.01	.02		End Point Criteria Verification							
.06	.01			Facility Transition							
.06	.02	.01		Surveillance and Inspections							
.06	.02	.02		Routine Radiological Surveys	.06	.08	.10				Radiological Investigations
.06	.02	.03		Maintenance and Revegetation							
.06	.02	.04		Corrective Actions							
.06	.02	.05		Herbicide & Pesticide Applications							
.06	.02			Outdoor Surveillance & Maintenance							
.06	.03	.01		Surveillance & Inspections							
.06	.03	.02		Facility/Building Maintenance							
.06	.03	.03		Facility Risk Assessment							
.06	.03	.04		Major Facility Repairs							
.06	.03	.05		Facility System Replacement							
.06	.03	.06		ACM Encapsulation							
.06	.03	.07		Routine Radiological Surveys							
.06	.03			Indoor Surveillance & Maintenance							
.07	.00			INVESTIGATIONS & MONITORING/SAMPLE COLLECTION	.06	.00					FIELD INVESTIGATION
.07	.00			INVESTIGATIONS & MONITORING/SAMPLE COLLECTION				.02	.00		MONITORING, SAMPLING, TESTING, AND ANALYSIS
.07	.00			INVESTIGATIONS & MONITORING/SAMPLE COLLECTION				.02	.08	.00	Sampling Radioactive Contaminated Media
.07	.01	.01		Ecological Resources Reconnaissance	.06	.01	.01				Ecological Resources Reconnaissance
.07	.01	.02		Well Inventory	.06	.01	.02				Well Inventory
.07	.01	.03		Residential Well Sampling	.06	.01	.03				Residential Well Sampling
.07	.01	.04		Land Survey	.06	.01	.04				Land Survey
.07	.01	.05		Topographic Mapping	.06	.01	.05				Topographic Mapping
.07	.01	.06		Field Screening	.06	.01	.06				Field Screening
.07	.01	.07	.01	<i>Collection and review of existing documents</i>							
.07	.01	.07	.02	<i>Inventory of equipment and materials</i>							
.07	.01	.07	.03	<i>Structural characterization</i>							
.07	.01	.07		Facility Survey and Characterization							
.07	.01			Site Reconnaissance	.06	.01	.00				Site Reconnaissance
.07	.02	.01		Meteorological Monitoring Station				.02	.01	.01	Meteorological Monitoring Station
.07	.02	.02		Instrument Shelter				.02	.01	.02	Instrument Shelter
.07	.02			Meteorological Monitoring				.02	.01		Meteorological Monitoring
.07	.03			Site Contaminant Surveys / Radiation Monitoring				.02	.02		Radiation Monitoring
.07	.03			Site Contaminant Surveys / Radiation Monitoring				.02	.09	.01	Air/Industrial Hygiene Analysis
.07	.03			Site Contaminant Surveys / Radiation Monitoring				.17	.01	.03	Radioactivity Surveys
.07	.03			Site Contaminant Surveys / Radiation Monitoring				.17	.07	.01	Radioactivity Survey
.07	.04	.01		Hydro Punch	.06	.05	.03				Hydro Punch
.07	.04	.02		Tidal Influence Study	.06	.05	.04				Tidal Influence Study
.07	.04	.03		Hydraulic Tests (Pump Test)	.06	.05	.05				Hydraulic Tests (Pump Test)
.07	.04	.04		Groundwater Elevation Measurement	.06	.05	.06				Groundwater Elevation Measurement
.07	.04			Hydrogeological Investigations - Groundwater							
.07	.05	.01		Tidal Influence Study	.06	.06	.02				Tidal Influence Study
.07	.05	.02		Surface Water Elevation Measurement	.06	.06	.03				Surface Water Elevation Measurement
.07	.05			Hydrogeological Investigations - Surface Water	.06	.06	.00				Conduct Hydrogeological Investigations - Surface Water
.07	.06	.01		Geological Investigations (Soils/Sediments)							
.07	.06	.02		Surface Geophysical Activity	.06	.08	.01				Surface Geophysical Activity
.07	.06	.03		Magnetometer	.06	.08	.02				Magnetometer
.07	.06	.04		Electromagnetic	.06	.08	.03				Electromagnetic
.07	.06	.05		Ground Penetration Radar	.06	.08	.04				Ground Penetration Radar

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.07	.06	.06		Seismic Refraction	.06	.08	.05				Seismic Refraction
.07	.06	.07		Resistivity	.06	.08	.06				Resistivity
.07	.06	.08		Site Meteorology	.06	.08	.07				Site Meteorology
.07	.06	.09		Cone Penetrometer Survey	.06	.08	.08				Cone Penetrometer Survey
.07	.06	.10		Remote Sensor Survey	.06	.08	.09				Remote Sensor Survey
.07	.06			Geophysical / Geotechnical Investigation	.06	.08	.00				Conduct Geophysical Investigations
.07	.06			Geophysical / Geotechnical Investigation				.02	.11		Geotechnical Testing
.07	.06			Geophysical / Geotechnical Investigation				.02	.12		Geotechnical Instrumentation
.07	.07	.01		Wetland and Habitat Delineation	.06	.09	.01				Wetland and Habitat Delineation
.07	.07	.02		Wildlife Observations	.06	.09	.02				Wildlife Observations
.07	.07	.03		Community Characterization	.06	.09	.03				Community Characterization
.07	.07	.04		Identification of Endangered Species	.06	.09	.04				Identification of Endangered Species
.07	.07	.04		Identification of Endangered Species	.06	.09	.05				Biota Sampling / Population Studies
.07	.07			Ecological Investigation	.06	.09	.00				Conduct Ecological Investigation
.07	.08	.01		Sample Collection	.06	.04	.01				Sample Collection
.07	.08	.02		Air Monitoring Station	.06	.04	.02				Air Monitoring Station
.07	.08			Air Monitoring and Sampling				.02	.03		Air Monitoring and Sampling
.07	.08			Air Monitoring and Sampling	.06	.04	.00				Conduct Air Sampling
.07	.09	.01		Sample Collection - Groundwater	.06	.05	.02				Sample Collection
.07	.09	.02		Sample Collection -Groundwater				.02	.05	.02	Ground Water
.07	.09	.02		Well Refurbishment							
.07	.09			Groundwater Sampling and Monitoring				.02	.05	.00	Sampling Surface Water/Ground Water/Liquid Waste
.07	.09			Groundwater Sampling / Monitoring	.06	.05	.00				Conduct Hydrogeological Investigations - Groundwater
.07	.09			Groundwater Sampling/Monitoring				.02	.08	.02	Ground Water
.07	.10	.01		Sample Collection - Surface Water				.02	.05	.01	Surface Water
.07	.10	.02		Decon of Equipment							
.07	.10			Surface Water Sampling	.06	.06	.01				Sample Collection
.07	.10			Surface Water Sampling				.02	.05	.00	Sampling Surface Water/Ground Water/Liquid Waste
.07	.10			Surface Water Sampling				.02	.08	.01	Surface Water
.07	.11	.01		Surface Soil Sample Collection	.06	.03	.01				Surface Soil Sample Collection
.07	.11	.01		Surface Soil Sample Collection				.02	.06	.01	Surface Soil
.07	.11	.01		Surface Soil Sample Collection				.02	.08	.04	Surface Soil
.07	.11	.02		Subsurface Soil Sample Collection	.06	.03	.02				Subsurface Soil Sample Collection
.07	.11	.02		Subsurface Soil Sample Collection				.02	.06	.02	Sub-surface Soil
.07	.11	.02		Subsurface Soil Sample Collection				.02	.08	.05	Sub-Surface Soil
.07	.11	.03		Soil Boring / Permeability Sampling	.06	.03	.03				Soil Boring / Permeability Sampling
.07	.11	.04		Sediments Sample Collection	.06	.03	.04				Sediments Sample Collection
.07	.11	.04		Sediments Sample Collection				.02	.06	.03	Sediment/Sludge
.07	.11	.04		Sediments Sample Collection				.02	.08	.06	Sediment/Sludge
.07	.11	.05		Soil Gas Survey	.06	.03	.05				Soil Gas Survey
.07	.11	.06		Test Pit	.06	.03	.06				Test Pit
.07	.11	.9x		Other				.02	.08	.07	Other Contaminated Media
.07	.11			Soil / Sediment Sampling	.06	.03	.00				Conduct Geological Investigations (Soils/sediments)
.07	.11			Soil / Sediment Sampling				.02	.06	.00	Sampling Soil and Sediment
.07	.12	.01		Biota Sampling / Population Studies							
.07	.12			Ecological Sampling							
.07	.13	.01		Sample Collection - Gas	.06	.07	.01				Sample Collection - (Gas, Liquid, Solid)
.07	.13	.02		Sample Collection - Liquid	.06	.07	.01				Sample Collection - (Gas, Liquid, Solid)
.07	.13	.02		Sample Collection - Liquid				.02	.05	.03	Liquid Waste
.07	.13	.02		Sample Collection - Liquid				.02	.08	.03	Liquid Waste
.07	.13	.03		Sample Collection - Solid	.06	.07	.01				Sample Collection - (Gas, Liquid, Solid)

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.07	.13	.03		Sample Collection - Solid				.02	.07		Sampling Asbestos
.07	.13	.9x		Other				.02	.05	.04	Treatment Process Effluents
.07	.13			Material/Waste Sampling				.02	.05	.00	Sampling Surface Water/Ground Water/Liquid Waste
.07	.13			Material/Waste Sampling	.06	.07	.00				Conduct Waste Investigations
.07	.14	.01		Hand Scanning							
.07	.14	.02		Smears and Swipes							
.07	.14	.03		Destructive Sampling (Including Removal of Paints, Drilling, Cutting of Structures/Equipment, etc)							
.07	.14			Contaminated Building/Structures/Equipment Samples	.06	.10					Contaminated Building / Structures Samples
.07	.14			Contaminated Building/Structures/Equipment Samples				.17	.04	.17	Radioactive Waste Characterization
.07	.14			Contaminated Building/Structures/Equipment Samples				.17	.04	.18	Radioactive Waste Characterization for Recycling
.07	.14			Contaminated Building/Structures/Equipment Samples				.17	.04	.19	Radioactive Waste Characterization for Final Disposal
.07	.15			Monitoring Well Systems	.06	.05	.01				Well System Installation
.07	.15			Monitoring Well Systems				.02	.04		Monitoring Wells
.07	.16			Construct Site Specific Geographical Information System (GIS)							
.07	.17			Historical/Cultural/Archeological Investigation							
.08	.00			SAMPLE ANALYSIS	.08	.00					OFF-SITE LABORATORY SAMPLE ANALYSIS
.08	.00			SAMPLE ANALYSIS	.09	.00					ON-SITE LABORATORY SAMPLE ANALYSIS
.08	.00			SAMPLE ANALYSIS	.09	.11	.00				Perform Temporary/Mobile Laboratory Analysis
.08	.00			SAMPLE ANALYSIS				.02	.00		MONITORING, SAMPLING, TESTING, AND ANALYSIS
.08	.00			SAMPLE ANALYSIS				.02	.09	.00	Laboratory Chemical Analysis
.08	.00			SAMPLE ANALYSIS				.02	.09	.03	Priority Pollutant Analysis (all media)
.08	.00			SAMPLE ANALYSIS				.02	.09	.05	Hazardous Waste (RCRA) Analysis
.08	.00			SAMPLE ANALYSIS				.02	.09	.06	Miscellaneous Waste Analysis
.08	.00			SAMPLE ANALYSIS				.02	.10	.00	Radioactive Waste Analysis
.08	.01	.01		Organic	.08	.01	.01				Organic
.08	.01	.01		Organic	.09	.01	.01				Organic
.08	.01	.02		Inorganic	.08	.01	.02				Inorganic
.08	.01	.02		Inorganic	.09	.01	.02				Inorganic
.08	.01	.03		Radiochemistry	.08	.01	.03				Radiochemistry
.08	.01	.03		Radiochemistry	.09	.01	.03				Radiochemistry
.08	.01	.03		Radiochemistry				.02	.10	.02	Rad Analytical Air
.08	.01			Air / Gas Sample Analysis	.08	.01	.00				Analyze Air / Gas Sample Analysis
.08	.01			Air / Gas Sample Analysis	.09	.01	.00				Analyze Air / Gas Sample Analysis
.08	.01			Air / Gas Sample Analysis				.02	.09	.01	Air/Industrial Hygiene Analysis
.08	.02	.01		Organic	.08	.02	.01				Organic
.08	.02	.01		Organic	.09	.02	.01				Organic
.08	.02	.02		Inorganic	.08	.02	.02				Inorganic
.08	.02	.02		Inorganic	.09	.02	.02				Inorganic
.08	.02	.03		Radiochemistry	.08	.02	.03				Radiochemistry
.08	.02	.03		Radiochemistry	.09	.02	.03				Radiochemistry
.08	.02	.03		Radiochemistry				.02	.10	.03	Rad Analytical Liquid
.08	.02			Groundwater Sample Analysis	.08	.02	.00				Analyze Groundwater Sample Analysis
.08	.02			Groundwater Sample Analysis	.09	.02	.00				Analyze Groundwater Sample Analysis
.08	.02			Groundwater Sample Analysis				.02	.09	.02	General Water Quality and Wastewater Analysis
.08	.03	.01		Organic	.08	.03	.01				Organic
.08	.03	.01		Organic	.09	.03	.01				Organic
.08	.03	.02		Inorganic	.08	.03	.02				Inorganic
.08	.03	.02		Inorganic	.09	.03	.02				Inorganic
.08	.03	.03		Radiochemistry	.08	.03	.03				Radiochemistry
.08	.03	.03		Radiochemistry	.09	.03	.03				Radiochemistry

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.08	.03	.03		Radiochemistry				.02	.10	.03	Rad Analytical Liquid
.08	.03			Surface Water Sample Analysis				.02	.09	.02	General Water Quality and Wastewater Analysis
.08	.03			Surface Water Sample Analysis	.08	.03	.00				Analyze Surface Water Sample Analysis
.08	.03			Surface Water Sample Analysis	.09	.03	.00				Analyze Surface Water Sample Analysis
.08	.04	.01		Organic	.08	.04	.01				Organic
.08	.04	.01		Organic	.09	.04	.01				Organic
.08	.04	.02		Inorganic	.08	.04	.02				Inorganic
.08	.04	.02		Inorganic	.09	.04	.02				Inorganic
.08	.04	.03		Radiochemistry	.08	.04	.03				Radiochemistry
.08	.04	.03		Radiochemistry	.09	.04	.03				Radiochemistry
.08	.04	.03		Radiochemistry				.02	.10	.05	Rad Analytical Vegetation/Sediment/Soil
.08	.04	.04		Physical Characteristics (I.e., Size Distribution, Moisture Content, Porosity, Etc)							
.08	.04			Soil/Sediment Sample Analysis				.02	.11		Geotechnical Testing
.08	.04			Soil / Sediment Sample Analysis	.08	.04	.00				Analyze Soil / Sediment Sample Analysis
.08	.04			Soil / Sediment Sample Analysis	.09	.04	.00				Analyze Soil / Sediment Sample Analysis
.08	.04			Soil / Sediment Sample Analysis				.02	.09	.07	Soil and Sediment Analysis
.08	.05	.01		Organic	.08	.05	.01				Organic
.08	.05	.01		Organic	.09	.05	.01				Organic
.08	.05	.02		Inorganic	.08	.05	.02				Inorganic
.08	.05	.02		Inorganic	.09	.05	.02				Inorganic
.08	.05	.03		Radiochemistry	.08	.05	.03				Radiochemistry
.08	.05	.03		Radiochemistry	.09	.05	.03				Radiochemistry
.08	.05			Gas Waste Sample Analysis	.08	.05	.00				Analyze Waste (Gas) Samples
.08	.05			Gas Waste Sample Analysis	.09	.05	.00				Analyze Waste (Gas) Samples
.08	.06	.01		Organic	.08	.06	.01				Organic
.08	.06	.01		Organic	.09	.06	.01				Organic
.08	.06	.02		Inorganic	.08	.06	.02				Inorganic
.08	.06	.02		Inorganic	.09	.06	.02				Inorganic
.08	.06	.03		Radiochemistry	.08	.06	.03				Radiochemistry
.08	.06	.03		Radiochemistry	.09	.06	.03				Radiochemistry
.08	.06	.03		Radiochemistry				.02	.10	.03	Rad Analytical Liquid
.08	.06			Liquid Material/Waste Sample Analysis				.02	.09	.02	General Water Quality and Wastewater Analysis
.08	.06			Liquid Material/Waste Sample Analysis	.08	.06	.00				Analyze Waste (Liquid) Samples
.08	.06			Liquid Material/Waste Sample Analysis	.09	.06	.00				Analyze Waste (Liquid) Samples
.08	.07	.01		Organic	.08	.07	.01				Organic
.08	.07	.01		Organic	.09	.07	.01				Organic
.08	.07	.02		Inorganic	.08	.07	.02				Inorganic
.08	.07	.02		Inorganic	.09	.07	.02				Inorganic
.08	.07	.03		Radiochemistry	.08	.07	.03				Radiochemistry
.08	.07	.03		Radiochemistry	.09	.07	.03				Radiochemistry
.08	.07			Solid Material/Waste Sample Analysis	.08	.07	.00				Analyze Waste (Solid) Samples
.08	.07			Solid Material/Waste Sample Analysis	.09	.07	.00				Analyze Waste (Solid) Samples
.08	.08	.01		Organic	.08	.08	.01				Organic
.08	.08	.01		Organic	.09	.08	.01				Organic
.08	.08	.02		Inorganic	.08	.08	.02				Inorganic
.08	.08	.02		Inorganic	.09	.08	.02				Inorganic
.08	.08	.03		Radiochemistry	.08	.08	.03				Radiochemistry
.08	.08	.03		Radiochemistry	.09	.08	.03				Radiochemistry
.08	.08	.03		Radiochemistry				.02	.10	.01	Rad Analytical Animal Tissue/Bone
.08	.08	.03		Radiochemistry				.02	.10	.04	Rad Analytical Urine/Feces

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.08	.08	.03		Radiochemistry				.02	.10	.06	Rad Analytical Miscellaneous
.08	.08			Biota Sample Analysis	.08	.08	.00				Analyze Biota Samples
.08	.08			Biota Sample Analysis	.09	.08	.00				Analyze Biota Samples
.08	.09			Bioassay Sample Analysis	.08	.09					Analyze Bioassay Sample Analysis
.08	.09			Bioassay Sample Analysis	.09	.09					Analyze Bioassay Sample
.08	.09			Bioassay Sample Analysis	.09	.11	.09				Bioassay Sample Analysis
.08	.09			Bioassay Sample Analysis				.02	.09	.04	Biomonitoring and Bioassay Analysis
.08	.10			Bioaccumulation Studies	.08	.10					Perform Bioaccumulation Studies
.08	.10			Bioaccumulation Studies	.09	.10					Perform Bioaccumulation Studies
.08	.10			Bioaccumulation Studies	.09	.11	.10				Bioaccumulation Studies
.08	.11			Mobile - Air / Gas Sample Analysis	.09	.11	.01				Air / Gas Sample Analysis
.08	.12			Mobile - Groundwater Sample Analysis	.09	.11	.02				Mobile - Groundwater Sample Analysis
.08	.13			Mobile - Surface Water Sample Analysis	.09	.11	.03				Surface Water Sample Analysis
.08	.14			Mobile - Soil / Sediment Sample Analysis	.09	.11	.04				Soil / Sediment Sample Analysis
.08	.15			Mobile - Gas Waste Sample Analysis	.09	.11	.05				Gas Waste Sample Analysis
.08	.16			Mobile - Liquid Waste Sample Analysis	.09	.11	.06				Liquid Waste Sample Analysis
.08	.17			Mobile - Solid Waste Sample Analysis	.09	.11	.07				Solid Waste Sample Analysis
.08	.18			Mobile - Biota Sample Analysis	.09	.11	.08				Biota Sample Analysis
.08	.19	.01		Organic							
.08	.19	.02		Inorganic							
.08	.19	.03		Radiochemistry							
.08	.19			Real Time - Air / Gas Sample Analysis							
.08	.20	.01		Organic							
.08	.20	.02		Inorganic							
.08	.20	.03		Radiochemistry							
.08	.20	.04		Physical Parameters (pH, Temperature, Turbidity, etc)							
.08	.20			Real Time - Groundwater Sample Analysis							
.08	.21			Real Time - Surface Water Sample Analysis							
.08	.22			Real Time - Soil / Sediment Sample Analysis							
.08	.23			Real Time - Gas Waste Sample Analysis							
.08	.24			Real Time - Liquid Waste Sample Analysis							
.08	.25			Real Time - Solid Waste Sample Analysis							
.09	.00			SAMPLE MANAGEMENT/DATA VALIDATION/DATA EVALUATION	.10	.00					ANALYTICAL SUPPORT/SAMPLE MGMT/DATA VALIDATION
.09	.01	.01		Groundwater Samples	.10	.01	.01				Groundwater Samples
.09	.01	.02		Surface and Subsurface Soil Samples	.10	.01	.02				Surface and Subsurface Soil Samples
.09	.01	.03		Surface Water & Sediment Samples	.10	.01	.03				Surface Water & Sediment Samples
.09	.01	.04		Air Samples	.10	.01	.04				Air Samples
.09	.01	.05		Biota Samples	.10	.01	.05				Biota Samples
.09	.01	.06		Other Types of Media Sampling and Screening							
.09	.01			Prepare and Ship Environmental Samples				.02	.05	.05	Sample Shipping and Handling
.09	.01			Prepare and Ship Environmental Samples	.10	.01	.00				Prepare and Ship Environmental Samples
.09	.01			Prepare and Ship Environmental Samples				.02	.06	.04	Sample Shipping and Handling
.09	.01			Prepare and Ship Environmental Samples				.02	.08	.08	Sample Shipping and Handling
.09	.02			Coordinate with Sample MGT Personnel / Regulators	.10	.02					Coordinate With Sample Mgt Personnel/Regulators
.09	.03			Implement EPA-Approved Laboratory QA Program	.10	.03					Implement EPA-Approved Laboratory QA Program
.09	.04	.01		Chain of Custody	.10	.04	.01				Chain of Custody
.09	.04	.02		Sample Retention	.10	.04	.02				Sample Retention
.09	.04	.03		Data Storage	.10	.04	.03				Data Storage
.09	.04			Provide Sample Management	.10	.04	.00				Provide Sample Management
.09	.05			Derived Waste Disposal (Gas, Liquid, Solid)	.06	.07	.02				Derived Waste Disposal - (Gas, Liquid, Solid)
.09	.06	.01		Review Analysis Results to Validation Criteria	.10	.05	.01				Review Analysis Results to Validation Criteria

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.09	.06	.02		Provide Written Documentation of Validation Efforts	.10	.05	.02				Provide Written Documentation of Validation Efforts
.09	.06			Perform Data Validation	.10	.05	.00				Perform Data Validation
.09	.07			Data Usability Evaluation / Field QA / QC	.11	.00					DATA EVALUATION
.09	.07			Data Usability Evaluation / Field QA / QC	.11	.01					Data Usability Evaluation/Field QA/QC
.09	.08	.01		Evaluate Geological Data (Soils / Sediments)	.11	.02	.01				Evaluate Geological Data (Soils/Sediments)
.09	.08	.02		Evaluate Air Data	.11	.02	.02				Evaluate Air Data
.09	.08	.03		Devaluate Hydrogeological Data -Groundwater	.11	.02	.03				Evaluate Hydrogeological Data - Groundwater
.09	.08	.04		Evaluate Hydrogeological Data - Surface Water	.11	.02	.04				Evaluate Hydrogeological Data - Surface Water
.09	.08	.05		Evaluate Waste Data	.11	.02	.05				Evaluate Waste Data
.09	.08	.06		Evaluate Geophysical Data	.11	.02	.06				Evaluate Geophysical Data
.09	.08	.07		Evaluate Ecological Data	.11	.02	.07				Evaluate Ecological Data
.09	.08	.08		Evaluate Historical/Cultural/Archeological Data							
.09	.08			Data Reduction, Tabulation and Evaluation/Analysis	.11	.02	.00				Data Reduction, Tabulation and Evaluation
.09	.09	.01		Contaminant Concentration, Location, Fate and Transport Modeling	.11	.03					Contaminant Fate and Transport Modeling
.09	.09	.02		Water Quality							
.09	.09	.03		Groundwater							
.09	.09	.04		Air							
.09	.09	.05		Other Modeling	.11	.04					Other Modeling
.09	.09			Modeling							
.09	.10			Document Data Evaluation	.11	.05					Document Data Evaluation
.09	.11			Combined Sample Management							
.09	.12			Combined Data Management							
.09	.13			Data Review for Effectiveness							
.10	.00			TREATABILITY/RESEARCH & DEVELOPMENT	.15	.00					TREATABILITY STUDIES
.10	.00			TREATABILITY/RESEARCH & DEVELOPMENT				.17	.05	.00	Research & Development (R&D)
.10	.01			Literature Search	.15	.01					Literature Search
.10	.01			Literature Search				.17	.05	.01	Literature Review
.10	.02			Data Collection				.17	.05	.02	Data Collection
.10	.03			Develop Treatability Work Plan	.15	.02					Develop Treatability Work Plan
.10	.04	.01		Design & procure new equipment for dismantling the reactor vessel & internals				.17	.04	.09	Design and Procurement of Special Tools for Dismantling
.10	.04	.02		Design and procure new equipment for remote handling device or articulated manipulators				.17	.05	.12	Robotics and Manipulators (R&D)
.10	.04	.03		Design and Procure New Equipment for Constraint Handling, Packaging and Transportation Requirement							
.10	.04	.04		Design and procure new equipment for remote disassembly/segmentation for complex subcomponents				.17	.05	.10	Research and Development on Remotely Operated Systems
.10	.04	.05	01	<i>Remote-viewing systems for underwater operations</i>							
.10	.04	.05	02	<i>Feedback and control systems for underwater operations</i>							
.10	.04	.05	03	<i>Turntables for underwater operations</i>							
.10	.04	.05	04	<i>Support systems for maintaining water clarity</i>							
.10	.04	.05	05	<i>Support systems for collecting cutting fines</i>							
.10	.04	.05	06	<i>Support system to control/eliminate explosive gas mixtures formation during cutting or from dissolution of H₂O</i>							
.10	.04	.05		Design and Procure New Equipment for Remote Underwater Work							
.10	.04	.06		Design and Procure New Equipment for Complex Waste Treatment				.17	.05	.09	Development of Adapted Waste Treatment and Disposal Tech
.10	.04	.07		Design and Procure New Equipment for Complex Environmental Remediation Tasks							
.10	.04	.08		Design and Procure New Equipment for Dismantling Other Components and Structures				.17	.03	.01	Site Dismantling Equipment
.10	.04	.09		Leasing of New or Specialty Equipment							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.10	.04	.10		Design and Procure New Measurement and Calculation Devices and Techniques							
.10	.04			Design/Procure New Tools and Equipment				.17	.05	.06	Development of New Dismantling Equipment
.10	.04			Design/Procure New Tools and Equipment				.17	.05	.07	Development or Use of New Decontamination Techniques
.10	.04			Design/Procure New Tools and Equipment				.17	.05	.08	Dev of Adapted Measurement Devices and Calc Techniques
.10	.04			Design/Procure New/Tools and Equipment				.17	.03	.00	Procurement of Equipment and Material
.10	.05	.01		Provide Test Facility and Equipment	.15	.03	.01				Provide Test Facility and Equipment
.10	.05	.02		Provide Vendor & Analytical Service	.15	.03	.02				Provide Vendor & Analytical Service
.10	.05	.03		Test and Operate Equipment	.15	.03	.03				Test and Operate Equipment
.10	.05	.04		Retrieve Sample for Testing	.15	.03	.04				Retrieve Sample for Testing
.10	.05	.05		Laboratory Analysis	.15	.03	.05				Laboratory Analysis
.10	.05	.06		Characterize and Dispose of Residuals	.15	.03	.06				Characterize and Dispose of Residuals
.10	.05			Bench Test	.15	.03	.00				Bench Test
.10	.06	.01		Provide Test Facility and Equipment	.15	.04	.01				Provide Test Facility and Equipment
.10	.06	.02		Provide Vendor & Analytical Service	.15	.04	.02				Provide Vendor & Analytical Service
.10	.06	.03		Test and Operate Equipment	.15	.04	.03				Test and Operate Equipment
.10	.06	.04		Retrieve Sample for Testing	.15	.04	.04				Retrieve Sample for Testing
.10	.06	.05		Laboratory Analysis	.15	.04	.05				Laboratory Analysis
.10	.06	.06		Characterize and Dispose of Residuals	.15	.04	.06				Characterize and Dispose of Residuals
.10	.06			Pilot Scale Test	.15	.04	.00				Pilot Scale Test
.10	.07	.01		Provide Test Facility and Equipment	.15	.05	.01				Provide Test Facility and Equipment
.10	.07	.02		Provide Vendor & Analytical Service	.15	.05	.02				Provide Vendor & Analytical Service
.10	.07	.03		Test and Operate Equipment	.15	.05	.03				Test and Operate Equipment
.10	.07	.04		Retrieved Sample For Testing	.15	.05	.04				Retrieve Sample for Testing
.10	.07	.05		Laboratory Analysis	.15	.05	.05				Laboratory Analysis
.10	.07	.06		Characterize and Dispose of Residuals	.15	.05	.06				Characterize and Dispose of Residuals
.10	.07			Field Test	.15	.05	.00				Field Test
.10	.08			Test Special Tools and Equipment							
.10	.09	.01		For Hardware and Softwares							
.10	.09	.02		For Operations and Maintenance							
.10	.09	.03		Installation							
.10	.09	.04		Testing							
.10	.09	.05		Performance Measurement							
.10	.09			Design, Procure, Test New Procedures							
.10	.10			Simulation / Modeling				.17	.05	.11	Simulation of Complicated Work on Model
.10	.11	.01		Compose Draft Report	.15	.06	.01				Compose Draft Report
.10	.11	.02		Respond to Comments / Finalize Report	.15	.06	.02				Respond To Comments / Finalize Report
.10	.11	.03		Reproduction / Distribution	.15	.06	.03				Reproduction / Distribution
.10	.11			Document Treatability Study	.15	.06	.00				Document Treatability Study
.10	.12	.01		Status Review							
.10	.12	.02		Technology Comparisons							
.10	.12	.03		Performance Comparisons							
.10	.12	.04		Technology Review for Ease of Operations, Waste Generation, Future Decontamination and Decommissioning							
.10	.13			Technology Transfer							
.10	.14			Product Qualification, Characterization, and Certification							
.11	.00			TREATMENT PLANT/FACILITY/PROCESS				.11	.50		Construction of Permanent Plant Facility
.11	.00			TREATMENT PLANT/FACILITY/PROCESS				.12	.50		Construction of Permanent Plant Facility
.11	.00			TREATMENT PLANT/FACILITY/PROCESS				.13	.50		Construction of Permanent Plant Facility
.11	.00			TREATMENT PLANT/FACILITY/PROCESS				.14	.50		Construction of Permanent Plant Facility
.11	.00			TREATMENT PLANT/FACILITY/PROCESS				.15	.50		Construction of Permanent Plant

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.11	.00			TREATMENT PLANT/FACILITY/PROCESS							
.11	.01			Reserved for Future Use							
.11	.01			Covered Treatment Train Technologies Unit							
.11	.02			Sheds & Other Supporting Facilities				.02	.13		On-Site Laboratory Facilities
.11	.02			Sheds & Other Supporting Facilities				.02	.14		Off-Site Laboratory Facilities
.11	.03			Simple Remedial Treatment Facilities (e.g., Equipment Slabs, Utilities)							
.11	.04			Treatment Train Facility (e.g., Rain Covers, Foundation, Utilities)				.03	.12		Permanent Cover Structure Over Contaminated Area
.11	.04			Treatment Train Facility (e.g., Rain Covers, Foundation, Utilities)				.18	.21		Transportation to Storage/Disposal Facility
.11	.04			Treatment Train Facility (e.g., Rain Covers, Foundation, Utilities)							
.11	.05			Full Scale Environmental Management Plant/Facility							
.11	.06	.01		Receiving & Inspection							
.11	.06	.02		Assay							
.11	.06	.03		Container Handling							
.11	.06	.04		Waste Stream Sort/Separation - Contact Handled							
.11	.06	.05		Separation/Handling Special Materials/Wastes							
.11	.06			Environmental Management Low/Moderate Hazard Treatment Front-End							
.11	.07	.01		Receiving & Inspection							
.11	.07	.02		Assay							
.11	.07	.03		Waste Stream Sort/Separation - Remote Handled							
.11	.07	.04		Remote - Container Handling							
.11	.07	.05		Separation/Handling Special Materials/Wastes							
.11	.07			Environmental Management High Hazard/Remote Treatment Front-End							
.11	.08	.01		Receiving & Inspection							
.11	.08	.02		Assay							
.11	.08	.03		Waste Stream Sort/Separation - Remote Handled							
.11	.08	.04		Remote - Container Handling							
.11	.08	.05		Separation/Handling Special Materials/Wastes							
.11	.08			Environmental Management Low Hazard Functional Area (e.g., Hazardous/Toxic)							
.11	.09			Environmental Management Moderate Hazard Functional Area (e.g., Hazardous/Toxic, LLW & MLLW)							
.11	.10			Environmental Management High Hazard Functional Area (e.g., ALLW, MALLW, TRU, Spent Fuel, CWM)							
.11	.11			Environmental Management Remote Functional Area (e.g., ALLW, MALLW, TRU, Spent Fuel, & CWM)							
.11	.12			Waste Treatment Fees and Taxes							
.11	.13	.01		Pre-Operations							
.11	.13	.02		Cold Commissioning							
.11	.13	.03		Hot Commissioning							
.11	.13			Facility Commissioning Activities							
.12	.00			STORAGE FACILITY/PROCESS							
.12	.01			Reserved for Future Use							
.12	.02	.01		Waste Storage Area (Pads & Cribs)				.18	.08		Cribs
.12	.02	.02		Waste Storage Structure/Building				.18	.07		Storage Bldgs/Protect Cover Struct/Other Bldgs and Struct
.12	.02	.02		Waste Storage Structure/Building							
.12	.02			Conventional Storage/Warehouse	.07	.15					Construct Sample/Derived Waste Storage Facility
.12	.02			Conventional Storage/Warehouses				.22	.03		Warehouse, Materials Handling, and Purchasing
.12	.03	.01		Receiving & Inspection							
.12	.03	.02		Assay							
.12	.03	.03		Container Handling							
.12	.03	.04		Waste Stream Sort/Separation - Contact Handled							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.12	.03	.05		Separation/Handling Special Materials/Wastes							
.12	.03			Storage Facility Front-End - Low / Moderate Hazard							
.12	.04	.01		Receiving & Inspection							
.12	.04	.02		Assay							
.12	.04	.03		Waste Stream Sort/Separation - Remote Handled							
.12	.04	.04		Remote - Container Handling							
.12	.04	.05		Separation/Handling Special Materials/Wastes							
.12	.04			Storage Facility Front-End - High / Remote Hazard							
.12	.05	.01		Low Hazardous Storage							
.12	.05	.02		Vault Storage							
.12	.05	.03		Silo Storage							
.12	.05	.04		Intermediate Fuel Storage				.17	.06	.02	Intermediate Fuel Storage
.12	.05	.04	.01	<i>Wet intermediate storage</i>							
.12	.05	.04	.02	<i>Dry intermediate storage</i>							
.12	.05			Contact Handled Storage							
.12	.06	.01		Vault Storage							
.12	.06	.02		Silo Storage							
.12	.06	.03		Pool Storage							
.12	.06			Remote Handled Storage							
.12	.07			Mixed Waste Storage Facility							
.12	.07			Mixed Waste Storage				.19	.23		Mixed Waste Storage Fees and Taxes
.12	.09			Waste Storage Fees and Taxes				.18	.23		Mixed Waste Storage Fees and Taxes
.13	.00			DISPOSAL FACILITY/PROCESS				.18	.00		DISPOSAL (OTHER THAN COMMERCIAL)
.13	.01			Reserved for Future Use							
.13	.02	.01		Receiving & Inspection							
.13	.02	.02		Assay							
.13	.02	.03		Container Handling				.18	.20		Container Handling
.13	.02	.04		Waste Stream Sort/Separation - Contact Handled							
.13	.02	.05		Separation/Handling Special Materials/Wastes							
.13	.02			Disposal Facility Front-End - Low / Moderate Hazard							
.13	.03	.01		Receiving & Inspection							
.13	.03	.02		Assay							
.13	.03	.03		Waste Stream Sort/Separation - Remote Handled							
.13	.03	.04		Remote - Container Handling							
.13	.03	.05		Separation/Handling Special Materials/Wastes							
.13	.03			Disposal Facility Front-End - High / Remote Hazard							
.13	.04			Landfill				.18	.01		Landfill/Burial Ground/Trench/Pits
.13	.05			Above Ground Vault				.18	.02		Above-Ground Vault
.13	.06			Underground Vault				.18	.03		Underground Vault
.13	.07			Underground Mine / Shaft				.18	.04		Underground Mine/Shaft
.13	.08			Tanks				.18	.05		Tanks
.13	.09			Pads (Tumulus / Retrievable Storage / Other)				.18	.06		Pads (Tumulus/Retrievable Storage/Other)
.13	.10			Confined Disposal Facilities (CDFs)							
.13	.11			Engineered Disposal				.18	.11		Construction of Permanent Disposal Facility
.13	.12			Intermediate Depth Disposal (Burial Ground/Trenches/Pits)				.18	.01		Landfill/Burial Ground/Trench/Pits
.13	.12			Intermediate Depth Disposal							
.13	.13			Geologic Disposal							
.13	.14			Shallow Land Disposal							
.13	.15			Deep Well Injection				.18	.09		Deep Well Injection
.13	.16			Silo Disposal							
.13	.17			Bore-Hole Disposal							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.13	.18			Disposal Fees and Taxes				.17	.02	.05	Disposal of System Fluids (water, oils,...)
.13	.18			Disposal Fees and Taxes				.17	.02	.06	Disposal of Special System Fluids (D20, sodium,...)
.13	.18			Disposal Fees and Taxes				.17	.02	.08	Disposal of Wastes from Decontamination
.13	.18			Disposal Fees and Taxes				.17	.02	.09	Disposal of Combustible Material
.13	.18			Disposal Fees and Taxes				.17	.02	.10	Disposal of Spent Resins
.13	.18			Disposal Fees and Taxes				.17	.02	.11	Disposal of Other Wastes from Reactor Operations
.13	.18			Disposal Fees and Taxes				.18	.22		Disposal Fees and Taxes
.13	.18			Disposal Fees and Taxes				.19	.22		Disposal Fees and Taxes
.14	.00			ORDNANCE & EXPLOSIVES REMOVAL & DESTRUCTION (CWM is X.11 & X.20-X.30)				.04	.00		ORDNANCE & EXPLOSIVE - CHEMICAL WARFARE MATERIAL (OE-CWM) REMOVAL AND DESTRUCTION
.14	.00			ORDNANCE & EXPLOSIVES REMOVAL & DESTRUCTION (CWM is X.11 & X.20-X.30)				.04	.01	.00	Ordnance Removal and Destruction
.14	.01			Demolition for OE Removal				.04	.01	.01	Demolition for OE Removal
.14	.02			Brush Clearing with OE				.04	.01	.02	Brush Clearing with OE
.14	.03			Blast Mats				.04	.01	.03	Blast Mats
.14	.04			Blast Shields				.04	.01	.04	Blast Shields
.14	.05			Surface Sweep (Visual)				.04	.01	.05	Surface Sweep (Visual)
.14	.06			Surface Sweep (Magnetometer)				.04	.01	.06	Surface Sweep (Magnetometer)
.14	.07			Surface Sweep (Mag & Flag)				.04	.01	.07	Surface Sweep (Mag & Flag)
.14	.08			Excavate by Hand 0' - 2' Depth				.04	.01	.08	Excavate by Hand 0' - 2' Depth
.14	.09			Excavate with Heavy Equipment > 2' Depth				.04	.01	.09	Excavate with Heavy Equipment > 2' Depth
.14	.10			Sifting				.04	.01	.10	Sifting
.14	.11			Removal of Chemical Warfare Material (CWM)				.04	.01	.11	Removal of Chemical Warfare Material (CWM)
.14	.12			OE On-Site Destruction				.04	.01	.12	OE On-Site Destruction
.14	.13			Bunkers (Temporary)				.04	.01	.14	Bunkers (Temporary)
.15	.00			DRUMS/TANKS/STRUCTURES/MISC. DEMOLITION & REMOVAL				.10	.00		DRUMS/TANKS/STRUCTURES/MISCELLANEOUS DEMOLITION AND REMOVAL
.15	.01			Drum Removal				.10	.01		Drum Removal
.15	.02			Tank Removal				.10	.02		Tank Removal
.15	.03	.01		Foundations							
.15	.03	.02		Columns							
.15	.03	.03		Beams and Supports							
.15	.03			Structure Removal				.10	.03		Structure Removal
.15	.04	.01	.01	<i>Temporary barrier</i>							
.15	.04	.01	.02	<i>Tenting</i>							
.15	.04	.01	.03	<i>Glovebags</i>							
.15	.04	.01		Establishment of Containment Around Contaminated Material to be Removed							
.15	.04	.02		Air Cleaning Units							
.15	.04	.03		Secondary Containment							
.15	.04	.04		Wet ACM w/ Amended Solutions							
.15	.04	.05	.01	<i>Reciprocating saw</i>							
.15	.04	.05	.02	<i>Portable band saw</i>							
.15	.04	.05	.03	<i>Mechanical shears</i>							
.15	.04	.05		Cut and Remove ACM							
.15	.04	.06		Prepare, Package and Remove ACM							
.15	.04	.07		Wet Brush or Clean Work Area and Surfaces							
.15	.04	.08		Apply Encapsulant to All Surfaces in Work Area							
.15	.04	.09		Provisions for Changing, Washing, and Waste Handling							
.15	.04			Asbestos Abatement				.10	.04		Asbestos Abatement
.15	.04			Asbestos Abatement				.17	.04	.14	Removal and Disposal of Asbestos
.15	.05			Piping & Pipeline Removal				.10	.05		Piping and Pipeline Removal

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management			32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
				2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	
.15	.06				Well Abandonment								
.16	.00				AIR POLLUTION/GAS COLLECTION & CONTROL					.07	.00		AIR POLLUTION/GAS COLLECTION AND CONTROL
.16	.01				Gas / Vapor Collection Trench System,					.07	.01		Gas/Vapor Collection Trench System
.16	.02				Gas / Vapor Collection Well System					.07	.02		Gas/Vapor Collection Well System
.16	.03				Gas Collection at Lagoon Cover					.07	.03		Gas/Vapor Collection at Lagoon Cover
.16	.04				Fugitive Dust / Vapor / Gas Emission Control					.07	.04		Fugitive Dust/Vapor/Gas Emissions Control
.17	.00				SURFACE WATER/SEDIMENTS CONTAINMENT, COLLECTION, OR CONTROL					.05	.00		SURFACE WATER COLLECTION AND CONTROL
.17	.00				SURFACE WATER/SEDIMENTS CONTAINMENT, COLLECTION, OR CONTROL					.09	.00		LIQUIDS/SEDIMENTS/SLUDGE COLLECTION AND CONTAINMENT
.17	.01				Dredging / Excavating					.09	.01		Dredging/Excavating
.17	.02				Berms					.05	.01		Berms/Dikes
.17	.03				Floodwalls					.05	.02		Floodwalls
.17	.04				Levees / Dams / Dikes					.05	.03		Levees
.17	.05				Terraces and Benches					.05	.04		Terraces and Benches
.17	.06				Channels / Waterways / Ditches					.05	.05		Channels/Waterways (Soil/Rock)
.17	.07				Chutes or Flumes					.05	.06		Chutes or Flumes
.17	.08				Sediments Barriers					.05	.07		Sediment Barriers
.17	.09				Storm Drainage					.05	.08		Storm Drainage
.17	.10				Lagoons / Basins / Tanks					.05	.09		Lagoons/Basins/Tanks/Dikes/Pump System
.17	.10				Lagoons / Basins / Tanks					.09	.07		Lagoons/Basins/Tanks/Dikes/Pump System
.17	.10				Lagoons / Basins / Tanks					.06	.06		Lagoons/Basins/Tanks/Dikes/Pump System
.17	.11				Pumping / Draining / Collection					.05	.10		Pumping/Draining/Collection
.17	.11				Pumping / Draining / Collection					.06	.06		Lagoons/Basins/Tanks/Dikes/Pump System
.17	.11				Pumping / Draining / Collection					.09	.07		Lagoons/Basins/Tanks/Dikes/Pump System
.17	.12				Erosion Control					.05	.13		Erosion Control
.17	.13				Aquatic Barrier								
.17	.14				Sediment Capping								
.18	.00				GROUNDWATER CONTAINMENT, COLLECTION, OR CONTROL					.06	.00		GROUNDWATER COLLECTION AND CONTROL
.18	.01				Extraction Wells					.06	.01		Extraction and Injection Wells
.18	.02				Injection Wells					.06	.01		Extraction and Injection Wells
.18	.03				Subsurface Drainage / Collection/French Drain					.06	.02		Subsurface Drainage/Collection
.18	.04				Slurry Walls					.06	.03		Slurry Walls
.18	.05				Grout Curtain					.06	.04		Grout Curtain
.18	.06				Sheet Piling					.06	.05		Sheet Piling
.19	.00				SOLIDS/SOILS CONTAINMENT (e.g., CAPPING) COLLECTION, OR CONTROL					.08	.05		Capping of Contaminated Area/Waste Pile (Soil/Asphalt Cap)
.19	.00				SOLIDS/SOILS CONTAINMENT (e.g., CAPPING) COLLECTION, OR CONTROL					.08	.00		SOLIDS COLLECTION AND CONTAINMENT
.19	.01				Contaminated Soil Collection					.08	.01		Contaminated Soil Collection
.19	.01				Contaminated Soil Collection					.10	.06		Radioactive Specific Waste Containment (Furnish/Fill)
.19	.02				Waste Containment, Portable (Furnish / Fill)					.08	.02		Waste Containment, Portable (Furnish/Fill)
.19	.02				Waste Containment, Portable (Furnish / Fill)					.08	.04		Radioactive Specific Waste Containment (Furnish/Fill)
.19	.03				Upper Vegetative (topsoil) Layer								
.19	.04				RCRA C								
.19	.05				RCRA D								
.19	.06				Asphalt/Concrete								
.19	.07				Landfill Cap Enhancement								
.19	.08				Engineered Cap								
.19	.09				Bottom Barrier								
.19	.9X				Other					.10	.07		Miscellaneous Items

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.20	.00			LIQUID WASTE/SLUDGE (e.g., UST/AST) CONTAINMENT, COLLECTION, OR CONTROL				.09	.00		LIQUIDS/SEDIMENTS/SLUDGE COLLECTION AND CONTAINMENT
.20	.01			Industrial Vacuuming				.09	.02		Industrial Vacuuming
.20	.02			Waste Containment - Portable				.09	.03		Waste Containment, Portable (Furnish/Fill)
.20	.02			Waste Containment - Portable				.09	.05		Radioactive Specific Waste Containment (Furnish/Fill)
.20	.03			Pumping / Draining / Collection				.06	.07		Pumping/Collection
.20	.03			Pumping / Draining / Collection				.09	.06		Pumping/Draining/Collection
.21	.00			IN-SITU BIOLOGICAL TREATMENT				.11	.00		BIOLOGICAL TREATMENT
.21	.01			Biological Barrier							
.21	.02			Reserved for Future Use							
.21	.03			Bioventing				.11	.12		Bioventing
.21	.04			Cometabolic Treatment							
.21	.05			Constructed Wetlands							
.21	.06			Enhanced Bioremediation				.11	.04		In-Situ Biodegradation/Bioreclamation
.21	.07			Land Treatment							
.21	.08			Natural attenuation							
.21	.09			Phytoremediation							
.21	.10			Baroball							
.22	.00			EX-SITU BIOLOGICAL TREATMENT				.11	.00		BIOLOGICAL TREATMENT
.22	.01			Activated Sludge				.11	.01		Activated Sludge (Seq Batch Reactors)
.22	.01			Activated Sludge				.11	.08		Sludge Stabilization - Aerobic
.22	.02			Biofilter							
.22	.03			Biopile (Bioheap, Biomound)				.11	.14		Biopile (Heap Pile Remediation)
.22	.04			Cometabolic Treatment							
.22	.05			Genetically Engineered Organisms				.11	.10		Genetically Engineered Organisms (White Rot Fungus)
.22	.06			Land Farming				.11	.03		Land Treatment/Farming (Solid Phase Biodegradation)
.22	.07			Rotating Biological Contactors				.11	.02		Rotating Biological Contactors
.22	.08			Slurry Phase Biological Treatment				.11	.11		Slurry Biodegradation
.22	.09			Trickling Filter				.11	.05		Trickling Filters
.22	.10			Biological Lagoons				.11	.06		Biological Lagoons
.22	.11			Anaerobic Sludge Digestion				.11	.09		Sludge Stabilization - Anaerobic
.22	.12			Composting				.11	.07		Composting
.22	.13			Fungal Biodegradation (White Rot Fungus)				.11	.10		Genetically Engineered Organisms (White Rot Fungus)
.23	.00			IN-SITU CHEMICAL TREATMENT				.12	.00		CHEMICAL TREATMENT
.23	.01			Reserved for Future Use							
.23	.02			Oxygen Release Compounds							
.23	.03			Neutralization				.12	.06		Neutralization
.23	.04			Oxidation / Reduction				.12	.01		Oxidation/Reduction
.23	.05			Soil Flushing (Surfactant/Solvent)				.13	.10		Soil Flushing (Surfactant/Solvent)
.24	.00			EX SITU CHEMICAL TREATMENT							
.24	.00			EX-SITU CHEMICAL TREATMENT				.12	.00		CHEMICAL TREATMENT
.24	.01			Glycolate/Alkali Metal / Polyethylene Glycol				.12	.10		Alkali Metal Dechlorination
.24	.01			Glycolate/Alkali Metal / Polyethylene Glycol				.12	.11		Alkali Metal/Polyethylene Glycol (A/PEG)
.24	.02			Base-Catalyzed Decomposition Process				.12	.12		Base-Catalyzed Decomposition Process
.24	.03			Chemical Hydrolysis				.12	.07		Chemical Hydrolysis
.24	.04			Chlorination				.12	.03		Chlorination
.24	.05			Dehalogenation				.12	.09		Dehalogenation (Catalytic Dechlorination)
.24	.06			Hydrogen Reduction							
.24	.07			Ion Exchange				.12	.05		Ion Exchange
.24	.08			Chemical Oxidation / Reduction				.12	.01		Oxidation/Reduction
.24	.08			Chemical Oxidation/Reduction							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.24	.09			Oxygen Release Compounds							
.24	.10			Ozonation				.12	.04		Ozonation
.24	.11			Solvent Extraction				.12	.02		Solvent Extraction
.24	.11			Solvent Extraction				.13	.17		Solvent Extraction
.24	.12			Neutralization				.12	.06		Neutralization
.24	.13			Ultraviolet Photolysis				.12	.08		Ultraviolet Photolysis
.24	.14			Ultraviolet Oxidation							
.24	.15			Coagulation / Flocculation / Precipitation				.13	.04		Coagulation/Flocculation/Precipitation
.24	.15			Coagulation/Flocculation/Precipitation							
.24	.16			Activated Alumina							
.24	.17			Forage Sponge							
.24	.18			Chemical Extraction (Acid/Alkaline Extraction)							
.25	.00			IN-SITU PHYSICAL TREATMENT				.13	.00		PHYSICAL TREATMENT
.25	.01			In-Well Air Stripping/Circulating Wells							
.25	.02			Air Sparging				.13	.32		Air Sparging
.25	.03			Reserved for Future Use							
.25	.04			Cryogenics							
.25	.05			Fracturing (Hydrofracturing)							
.25	.06			Lasagna Process							
.25	.07			Laser Cutting							
.25	.08			Laser (Surface Decon)				.10	.08		Contaminated Paint Removal
.25	.09			Passive/Reactive Treatment Wall							
.25	.10			Skimming							
.25	.11			Soil Flushing (Surfactant/Solvent)							
.25	.12			Solids Dewatering / Drying				.13	.11		Solids Dewatering
.25	.13			Reserved for Future Use							
.25	.14			Vacuum Blasting				.10	.08		Contaminated Paint Removal
.25	.15			Coating							
.25	.16			Electrokinetics							
.25	.17			Soil Vapor Extraction							
.25	.18			Fracturing (Pneumatic)							
.25	.19			Blast Enhanced Fracturing							
.25	.20			Directional Wells (Enhancement)							
.25	.21			Bioslurping				.11	.13		Bioslurping
.25	.22			Dual Phase Extraction (Multi-Phase)							
.25	.23			Draw-Down Pumping							
.25	.24			Two Phase Pumping							
.26	.00			EX-SITU PHYSICAL TREATMENT				.13	.00		PHYSICAL TREATMENT
.26	.01			Aeration				.13	.25		Aeration
.26	.02			Advanced Electrical Reactor				.13	.26		Advanced Electrical Reactor
.26	.03			Agglomeration				.13	.28		Agglomeration
.26	.04			Air Stripping				.13	.07		Air Stripping
.26	.05			Chelation				.13	.16		Chelation
.26	.06			Reserved for Future Use							
.26	.07			Compaction / Volume Reduction				.08	.06		Nuclear Waste Densification (Dynamic Compaction)
.26	.07			Compaction / Volume Reduction				.13	.27		Low Level Waste (LLW) Compaction
.26	.08			Reserved for Future Use							
.26	.09			Decant / Phase Separation							
.26	.10			Dissolved Air Flootation				.13	.13		Dissolved Air Flootation
.26	.11			Distillation				.13	.15		Distillation
.26	.12			E-Beam							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.26	.13			Electrochemical Oxidation							
.26	.14			Reserved for Future Use							
.26	.15			Electrolysis				.12	.13		Electrolysis
.26	.16			Equalization				.13	.05		Equalization
.26	.17			Evaporation				.13	.06		Evaporation
.26	.18			Soil Vapor Extraction				.13	.23		Soil Vapor Extraction
.26	.19			Filter Presses				.13	.30		Filter Presses
.26	.20			Media Filtration				.13	.01		Filtration/Ultrafiltration
.26	.21			Freeze Crystallization							
.26	.22			Reserved for Future Use							
.26	.23			Granular Activated Carbon Adsorption-Liquids				.13	.20		Carbon Adsorption - Liquids
.26	.24			Heavy Media Separation				.13	.14		Heavy Media Separation
.26	.25			High Pressure Aqueous Destruction							
.26	.26			Lignin Adsorption / Sorptive Clays				.13	.31		Lignin Adsorption/Sorptive Clays
.26	.27			Magnetic Separation							
.26	.28			Membrane Separation-Electrodialysis				.13	.22		Membrane Separation - Electrodialysis
.26	.29			Reverse Osmosis				.13	.21		Membrane Separation - Reverse Osmosis
.26	.30			Oil / Water Separation				.13	.12		Oil/Water Separation
.26	.31			Sedimentation				.13	.02		Sedimentation
.26	.32			Shredding				.13	.24		Shredding
.26	.33			Sieving (Size Separation, Screening, Physical Separation)				.13	.03		Straining
.26	.34			Skimming							
.26	.35			Soil Washing (Surfactant / Solvent)				.13	.09		Soil Washing (Surfactant/Solvent)
.26	.36			Solids Dewatering/Drying							
.26	.37			Sprinkler Irrigation							
.26	.38			Supercritical Extraction				.13	.18		Supercritical Extraction
.26	.39			Surfactant Enhanced Recovery							
.26	.40			Synthetic Resin Adsorption							
.26	.41			Gravity Separation							
.26	.42			Cryogenics							
.26	.43			Nanofiltration							
.26	.44			Ultrafiltration/Microfiltration				.13	.01		Filtration/Ultrafiltration
.26	.44			Membrane Pervaporation							
.27	.00			IN-SITU THERMAL TREATMENT				.14	.00		THERMAL TREATMENT
.27	.01			Thermal Blanket (with Vacuum Extraction)							
.27	.02			Six Phase Heating and Extraction							
.27	.03			Reserved for Future Use							
.27	.04			Steam/Hot Water Injection Vacuum Extraction				.13	.29		In-Situ Steam Extraction
.27	.05			High Temperature Thermal Desorption				.14	.07		High Temperature Thermal Desorption
.27	.06			Reserved for Future Use							
.27	.07			Low Temperature Thermal Desorption							
.27	.08			Radiofrequency/Electromagnetic Heating				.14	.05		Radio Frequency Heating
.28	.00			EX-SITU THERMAL TREATMENT				.14	.00		THERMAL TREATMENT
.28	.01			High Temperature Thermal Desorption (Ex-Situ)				.14	.07		High Temperature Thermal Desorption
.28	.02			Incineration				.14	.01		Incineration
.28	.02			Incineration				.18	.10		Incinerator
.28	.03			Low Temperature Thermal Desorption				.14	.02		Low Temperature Thermal Desorption
.28	.04			Molten Salt Oxidation				.14	.04		Molten Salt Destruction
.28	.05			Open Burning / Open Detonation							
.28	.06			Plasma							
.28	.07			Pyrolysis							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.28	.08			Reserved for Future Use							
.28	.09			Retort/Amalgamation							
.28	.10			Solar Detoxification / Evaporation				.14	.06		Solar Detoxification
.28	.11			Steam Stripping / Flushing / Reforming				.13	.08		Steam Stripping
.28	.12			Supercritical Water Oxidation				.14	.03		Supercritical Water Oxidation
.28	.13			Thermally Enhanced Vapor Extraction							
.28	.14			Molten Metal							
.28	.15			Hot Gas Decontamination							
.29	.00			IN-SITU STABILIZATION/FIXATION/ENCAPSULATION				.15	.00		STABILIZATION/FIXATION/ENCAPSULATION
.29	.01			Asphalt-Based Encapsulation							
.29	.02			Grout Injection				.15	.06		Radioactive Waste Solidification (Grouting/Other)
.29	.03			Pozzolan Process				.15	.03		In-Situ Pozzolan Process (Lime/Portland Cement)
.29	.04			In-Situ Vitrification				.15	.02		In-Situ Vitrification
.29	.05			In Situ Pipe Grouting							
.30	.00			EX SITU STABILIZATION/FIXATION/ENCAPSULATION				.15	.00		STABILIZATION/FIXATION/ENCAPSULATION
.30	.01			Asphalt-Based Encapsulation				.15	.05		Asphalt-Based Encapsulation
.30	.02			Calcination							
.30	.03			Polymer Based Encapsulation							
.30	.04			Pozzolan Process (Lime/Portland Cement)				.15	.04		Pozzolan Process (Lime/Portland Cement)
.30	.05			Reserved for Future Use							
.30	.06			Sludge Stabilization (Aggregate / Rock / Slag)				.15	.07		Sludge Stabilization (Aggregate/Rock/Slag)
.30	.07			Vitrification/Molten Glass				.15	.01		Molten Glass
.30	.08			Modified Sulfur Cement							
.30	.09			Polyethylene Extrusion							
.30	.10			Emulsified Asphalt							
.31	.00			FACILITY DECOMMISSIONING, & DISMANTLEMENT				.17	.00		DECONTAMINATION AND DECOMMISSIONING (D&D)
.31	.01	.01		Plant shutdown and inspection				.17	.02	.01	Plant Shutdown and Inspection
.31	.01	.02		Shutdown of unnecessary equipment							
.31	.01	.03		Compilation/verification of as-built drawings							
.31	.01	.04		General housekeeping							
.31	.01	.05		Identification, Maintenance, and Refurbishment of Systems and Equipment for Reuse							
.31	.01	.06		Isolation of power equipment				.17	.02	.12	Isolation of Power Equipment
.31	.01	.06	.01	<i>Isolation of power generating equipment</i>							
.31	.01	.06	.02	<i>Disconnection of power generating equipment from grid</i>							
.31	.01	.06		Isolation of Power Equipment							
.31	.01	.07		De-Energization and Isolation of Non-Essential Equipment							
.31	.01	.08		De-Energization and Isolation of Primary and Auxiliary Equipment in Reactor							
.31	.01			Nuclear Facility Shutdown and Inspection				.17	.02	.00	Facility Shutdown Activities
.31	.02	.01		Defueling and Transfer of Fuel				.17	.02	.02	Defueling and Transfer of Fuel to Temporary Spent Fuel Storage
.31	.02	.01		Defueling and Transfer of Fuel				.17	.06	.00	Spent Fuel Handling
.31	.02	.01	.01	<i>Unloading of fuel</i>							
.31	.02	.01	.02	<i>Transfer of fuel</i>							
.31	.02	.02		Draining and Drying or Blowdown of All Systems Not in Operation				.17	.02	.03	Drainage and Drying or Blowdown of all Systems not in Operation
.31	.02	.03	.01	<i>Water</i>							
.31	.02	.03	.02	<i>Oil</i>							
.31	.02	.03	.03	<i>Heavy water (D2O - deuterium oxide)</i>							
.31	.02	.03	.04	<i>Sodium</i>							
.31	.02	.03		Removal of System Fluids							
.31	.02	.04		Removal of Spent Resins							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.31	.02	.05		Modification of Access and Changing Facilities							
.31	.02	.06		Disconnection of Power Supplies/Perform Zero Energy Checks							
.31	.02	.07		Installation of Viewing Devices							
.31	.02	.08		Reduction or Elimination of Electrical and Water Supply Systems							
.31	.02	.09		Installation of Continuous Air Monitoring System							
.31	.02	.10		Removal of Nuclear Materials							
.31	.02	.11		Removal of Emergency Response Equipment, Tools, and Supplies							
.31	.02	.12		Asset Recovery							
.31	.02	.13		Removal of All Unattached Hazardous Material							
.31	.02	.14		Removal of All Unattached Ordnance							
.31	.02	.15		Removal of All Unattached Radiological Materials							
.31	.02	.16		Nuclear Fuel Material Inventory Recovery							
.31	.02	.17		Isolation of Unused-Resin Purification Stations Pending Subsequent Decommissioning							
.31	.02			Deactivation							
.31	.03	.01		Layout of Dormancy Period Control Area				.17	.04	.07	Layout of Dormancy Period Control Area
.31	.03	.02		Zoning for Long-Term Storage				.17	.04	.03	Zoning for Long-Term Storage
.31	.03	.03		Removal of Inventory Not Suitable for Long-Term Storage (Move to x.31.02)							
.31	.03	.04		Replacement or Enhancement of Equipment and Systems With More Efficient Components (Also X.06.03.05)							
.31	.03			Preparation for Dormancy							
.31	.04	.01		Isolation of Process, Utility, and Instrument Air Line Penetrations							
.31	.04	.02		Isolation of Electrical Power							
.31	.04	.03		Isolation of Fire Suppression Nozzles and Temperature Detectors							
.31	.04	.04		Isolation of Exhaust Ventilation System							
.31	.04	.05		Isolation of Gloveports and Bagports							
.31	.04	.06		Isolation of Criticality Drains							
.31	.04	.07		Isolation of All Other Seals and Lines							
.31	.04			Hot Cell Equipment Modification				.17	.07	.05	Cell Equipment Modification
.31	.05	.01		Isolation of Tanks							
.31	.05	.02		Isolation of Lines Entering and Exiting the Building							
.31	.05	.03		Isolation of Utilities to the Building							
.31	.05	.04		Sealing/Securing of Potential Pathways to the Environment				.17	.07	.12	Cell Window Replacement/Refurbishment
.31	.05	.05		Securing/Isolation of Building From Both Personnel and Animals/Insects							
.31	.05	.06		Securing of Windows and Doors							
.31	.05	.07		Repairing of Roof							
.31	.05	.08		Isolation of Containment Structure				.17	.04	.06	Isolation and Sealing of Containment Structure
.31	.05	.09		Removal of Obstacles to Dismantlement and Decommissioning							
.31	.05	.10	.01	<i>Physical reconfiguration of boundary</i>							
.31	.05	.10	.02	<i>Modification of access ways</i>							
.31	.05	.10	.03	<i>Reconfiguration, reconstruction, O&M of security fencing, access, barriers, facilities and others (see also x.05.14 & x.01.03.11)</i>							
.31	.05	.10		Site Boundary Reconfiguration							
.31	.05	.11	.00	Reconfiguration, Rerouting, and Operations and Maintenance of Utilities and Support Services (Also x.06.03.04)							
.31	.05	.11	.01	<i>Electrical</i>							
.31	.05	.11	.02	<i>HVAC</i>							
.31	.05	.11	.03	<i>Fire protection</i>							
.31	.05	.11	.04	<i>Lifting devices</i>							
.31	.05	.11	.05	<i>Alarms and monitors</i>							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.31	.05	.12		Reconfiguration or Modification of Containment Structure							
.31	.05			Site Reconfiguration, Isolating and Securing Structure							
.31	.06	.01		Removal of cranes							
.31	.06	.02	.01	<i>Hoists</i>							
.31	.06	.02	.02	<i>Bridges</i>							
.31	.06	.02	.03	<i>Tooling</i>							
.31	.06	.02	.04	<i>Transfer containers</i>							
.31	.06	.02	.05	<i>Storage racks</i>							
.31	.06	.02	.06	<i>Conveyors</i>							
.31	.06	.02	.07	<i>Upenders</i>							
.31	.06	.02	.08	<i>Carriages</i>							
.31	.06	.02	.09	<i>Inspection devices</i>							
.31	.06	.02	.10	<i>Cameras</i>							
.31	.06	.02	.11	<i>Manipulators</i>							
.31	.06	.02	.12	<i>Saws</i>							
.31	.06	.02		Removal of fuel positioning systems							
.31	.06			Removal of Fuel Handling Equipment				.17	.04	.08	Removal of Fuel Handling Equipment
.31	.07	.02		Calculations to evaluate inventory							
.31	.07			Radiological Inventory Categorization for D&D				.17	.04	.04	Radioactive Inventory Categorization
.31	.08	.01		Decontamination of systems for dose reduction/reduction of controlled area				.17	.02	.07	Decontamination of Systems for Dose Reduction
.31	.08	.01		Decontamination of Systems for Dose Reduction of Controlled Area				.17	.07	.03	Decon of Areas and Equip in Cell to Reduce Contamination Levels
.31	.08	.01		Decontamination of systems for dose reduction/reduction of controlled area							
.31	.08	.02		Washing of sump areas to remove excess residual chemicals							
.31	.08	.03		Protective clothing/breathing apparatuses							
.31	.08	.04		Decontamination and Release of Rad Zones							
.31	.08	.06		Surface decontamination of floors							
.31	.08	.08		Surface decontamination of equipment/dismantled piping							
.31	.08	.09		Surface decontamination of piping and tank internals							
.31	.08	.10		Decontamination of reactor vessel & internals							
.31	.08	.11		Decontamination of primary and auxiliary systems							
.31	.08	.12		Decontamination of biological shield							
.31	.08	.13		Decontamination of linings							
.31	.08	.14		Decontamination of areas and equipment in hot cells				.17	.07	.02	Decon of Areas and Equip in Cell to Facilitate Dismantling
.31	.08	.14		Decontamination of areas and equipment in hot cells				.17	.07	.04	Decontamination of Equipment for Transfer or Disposal
.31	.08	.14		Decontamination of areas and equipment in hot cells				.17	.07	.11	Cell Window Maintenance and Cleaning
.31	.08	.15		Decontamination for recycling and reuse							
.31	.08	.16		Locating Areas to Be Decontaminated							
.31	.08	.17		Reconfiguration of Area and Locations							
.31	.08	.18		Area Layout and Control/Containment Area Setup							
.31	.08	.19		Decontamination Area/Facility for Equipment and Vehicles							
.31	.08	.20		Decontamination Area/Facility for Personnel (I.e. Showers, Changing Rooms, Monitors, Waste Handling)							
.31	.08	.21		Decontamination of Buildings and Stacks							
.31	.08	.07		Surface decontamination of walls							
.31	.08			Preparation and Decontamination for Area and Equipment				.17	.02	.13	Decon of Areas and Equip in all Bldgs to Reduce Controlled Area
.31	.08			Preparation and Decontamination for Area and Equipment				.17	.04	.01	Decon of Areas and Equip in all Bldgs to Facilitate Dismantling
.31	.08			Decontamination of Area and Equipment				.17	.07	.00	Hot Cell Cleanup
.31	.09	.01		Cutting, sizing, and removal of equipment							
.31	.09	.02		Cutting, sizing, and removal of instrument tubing							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.31	.09	.03	.01	<i>Establishment of containment, whether by temporary barriers or by tenting</i>							
.31	.09	.03	.02	<i>Removal of concrete structures around the embedded piping</i>							
.31	.09	.03	.03	<i>Removal of the embedded piping</i>							
.31	.09	.03		Cutting, sizing, and removal of piping							
.31	.09	.04		Cutting, sizing, and removal of tanks							
.31	.09	.05		Cutting, sizing, and removal of structures/stacks							
.31	.09	.06		Sorting and Segregation of Materials and Components							
.31	.09			Dismantling and Removal of Contaminated Equipment /Material				.17	.04	.00	Dismantling Activities
.31	.09			Dismantling and Removal of Contaminated Equipment /Material				.17	.04	.05	Dismantling and Transfer of Contamination Equip and Mat to Contain Store
.31	.10	.01		Cutting, sizing, and removal of flat stock and pressure vessels							
.31	.10	.02		Cutting, sizing, and removal of internal and attached piping							
.31	.10	.03		Cutting, sizing, and removal of control rods							
.31	.10	.04		Cutting, sizing, and removal of assemblies							
.31	.10	.05		Cutting, sizing, and removal of instrumentation							
.31	.10	.06		Cutting, sizing, and removal of other internals							
.31	.10	.07	.00	Disconnecting of Reactor Vessels and Internals							
.31	.10	.07	.01	<i>Control-rod blades and motors, rod guide tubes, RSA-Guide tubes</i>							
.31	.10	.07	.02	<i>Reactor pressure vessel top head</i>							
.31	.10	.07	.03	<i>Reactor core top head</i>							
.31	.10	.07	.04	<i>Steam dryer</i>							
.31	.10	.07	.05	<i>Feedwater Sparger ring</i>							
.31	.10	.07	.06	<i>Core shroud, including fixing</i>							
.31	.10	.07	.07	<i>Reactor pressure vessel including support skirt and insulation</i>							
.31	.10	.08		Preparation of Work Area							
.31	.10	.09		Handling Devices and Protection Systems							
.31	.10	.10		Removal of Handling Devices and Protection Systems							
.31	.10	.11		Sorting and Segregation of Materials and Components							
.31	.10	.12		Dams on Vessel Nozzles or Gates to Isolate and Contain the Pool Being Used for Disassembly (If Performed Underwater)							
.31	.10			Dismantling Operations on Reactor Vessel & Internals				.17	.04	.10	Dismantling Operations on Reactor Vessels and Internals
.31	.11	.01		Disconnecting, Unbolting, Disassembly/Cutting, Sizing, and Removal of Piping							
.31	.11	.02		Disconnecting, Unbolting, Disassembly/Cutting, Sizing, and Removal of Pumps							
.31	.11	.03		Unbolting, Disassembly/Cutting, Sizing, and Removal of Containment Other Than Biological Shields							
.31	.11	.04		Disconnecting, Unbolting, Cutting, Sizing, and Removal of Primary Cooling Circuits							
.31	.11	.05		Removal of Subsurface Materials							
.31	.11	.06		Disconnecting, Unbolting, Cutting, Sizing, and Removal of Secondary Cooling Circuits							
.31	.11	.07		Disconnecting, Unbolting, Disassembly/Cutting, Sizing, and Removal of Other Primary or Auxiliary Systems							
.31	.11	.08		Preparation of Work Area							
.31	.11	.09		Removal, Dismantling or Demolition of Spent Fuel Pool and Foundation							
.31	.11	.10		Removal, Dismantling or Demolition of Hot Cells							
.31	.11	.11		Removal, Dismantling or Demolition of Footing Drain Removal							
.31	.11	.12		Sorting and Segregation of Materials and Components							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.31	.11	.13		Disconnecting, Unbolting, Disassembly/Cutting, Sizing, and Removal of Heat Exchangers							
.31	.11			Removal of Primary and Auxiliary Systems				.17	.04	.11	Removal of Primary and Auxiliary Systems
.31	.12	.01		Cutting, sizing, and removal of reinforcement materials							
.31	.12	.02		Cutting, sizing, and removal of biological shield/concrete							
.31	.12			Dismantling and Removal of Biological and Thermal Shield				.17	.04	.12	Removal of Biological Shield
.31	.13	.01		Drainage of spent fuel pool					.04	.02	Drainage of Spent Fuel Pool and Decontamination of Linings
.31	.13	.01		Drainage of spent fuel pool							
.31	.13	.02		Removal of Pool Linings				.17	.04	.02	Drainage of Spent Fuel Pool and Decontamination of Linings
.31	.13	.02		Removal of pool linings				.17	.04	.15	Removal of Pool Linings
.31	.13	.03		Removal of Contaminants in Pool							
.31	.13	.04		Cleaning of Surface to Limit Migration of Contaminants							
.31	.14	.01		Cutting, sizing, and removal of lead glass windows							
.31	.14	.02		Cutting, sizing, and removal of internal remote operated cranes							
.31	.14	.03		Cutting, sizing, and removal of manipulators							
.31	.14	.04		Cutting, sizing, and removal of Gloveports and Bagports							
.31	.14	.05		Cutting, sizing, and removal of liquid and gas piping							
.31	.14	.06		Cutting, sizing, and removal of ventilation systems							
.31	.14	.07		Cutting, sizing, and removal of lighting and electrical systems							
.31	.14	.08		Cutting, sizing, and removal of fire suppression systems							
.31	.14			Dismantling of In-Cell Equipment				.17	.07	.06	Dismantling of Primary and Auxiliary Services to Cell
.31	.14			Dismantling of In-Cell Equipment				.17	.07	.07	Dismantling of In-Cell Equipment
.31	.14			Dismantling of In-Cell Equipment				.17	.07	.00	Hot Cell Cleanup
.31	.15			Removal of Other Material and Equipment from Containment Structure				.17	.04	.13	Removal of Other Mat and Equip from Containment Structure
.31	.16	.01		Zoning for long-term storage							
.31	.16	.02		Mothballing				.17	.02	.14	Mothballing
.31	.16	.03		Entombment				.17	.02	.15	Entombment
.31	.16			Facility (Controlled Area) Hardening, Isolation or Entombment							
.31	.17	.01		Removal of Activated Material and Equipment Exceeding Release Levels				.17	.04	.16	Removal of Contamination from Areas and Structures in all Bldgs
.31	.17	.02		Removal of Contaminated Components That Can Only Be Dismantled at The End of The Removal Process							
.31	.17	.03		Removal of Non-Contaminated or Decontaminated Ancillary Equipment							
.31	.17	.03		Demolition Using Other Tools							
.31	.17			Removal of All Other Facilities, or Entire Contaminated Facility							
.31	.18			Dismantling of Temporary Fuel Storage Facility				.17	.06	.03	Dismantling/Disposal of Temporary Fuel Storage Facility
.31	.19			Dismantling of Intermediate Fuel Storage Facility							
.31	.20			Reprocessing Costs				.17	.06	.05	Reprocessing Costs
.31	.21	.01		Dismantling or Demolition of Environmental Treatment Unit or Facility							
.31	.21	.02		Dismantling or Demolition of Waste Storage Facilities							
.31	.21	.03		Dismantling or Demolition of Waste Disposal Facilities							
.31	.21			Dismantling or Demolition of Other Facilities							
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.05	.11		Transport to Treatment Plant
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.06	.08		Transport to Treatment Plant
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.17	.06	.04	Transfer Fuel from Intermediate Storage to Reprocessing
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.08	.03		Transport to Treatment Plant
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.09	.04		Transport to Treatment Plant
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.17	.06	.01	Transfer of Fuel from Temp Storage to Intermediate Storage
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.17	.06	.06	Transfer and Disposal of Wastes from Reprocessing
.32	.00			MATERIAL HANDLING/TRANSPORTATION				.17	.06	.08	Transfer and Disposal of Spent Fuel
.32	.01	.01		Receiving & Inspection							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.32	.01	.02		Stage & Store				.17	.07	.08	Transfer of Material and Equipment to Airlock Services
.32	.01	.03		Waste Conditioning				.17	.06	.07	Transfer and Conditioning of Spent Fuel
.32	.01	.03		Waste Conditioning							
.32	.01	.04		Contact Handled Packaging/Overpacking							
.32	.01	.05		Remote Handled Packaging/Overpacking							
.32	.01	.06		Washing							
.32	.01	.07		Waste Sorting and Segregation							
.32	.01			Waste Stream Handling/Packaging				.17	.07	.09	Packaging and Preparation of Cell Waste in Airlock
.32	.01			Waste Stream Handling / Packaging							
.32	.02	.01		Transportation Device/Equipment for On-Site Transfers				.17	.07	.10	Transfer of Material from Airlock to Shipping Dock
.32	.02	.01		Transportation Device/Equipment for On-Site Transfers							
.32	.02	.02		Transportation Device/Equipment for Off-Site Transportation							
.32	.02			Transportation Device / Equipment							
.32	.03			OE Off-Site Destruction Transportation to DOD Facility				.04	.01	.13	OE Off-Site Destruction Transportation to DOD Facility
.32	.10	.01		Special Permits, Packaging and Transport Requirements							
.32	.10	.02		Load and Haul Prepared Waste							
.32	.10	.03		Load and Haul Prepared Special Materials							
.32	.10			Certification & Shipping							
.32	.11	.01		Removed Drums/Tanks & Misc. Transportation							
.32	.11	.02		Surface Water (Free Product) & Sediments Transportation							
.32	.11	.03		Groundwater (Free Product) Transportation							
.32	.11	.04		Liquid Waste/Sludge (e.g., UST/AST) Transportation							
.32	.11	.05		Soil/Solid Waste Transportation							
.32	.11	.06		D&D Facility Contaminated Equipment/Material Transportation							
.32	.11			Transportation by Truck				.19	.21		Transportation to Storage/Disposal Facility
.32	.12	.01		Removed Drums/Tanks & Misc. Transportation							
.32	.12	.02		Surface Water (Free Product) and Sediments Transportation							
.32	.12	.03		Groundwater (Free Product) Transportation							
.32	.12	.04		Liquid Waste/Sludge (e.g., UST/AST) Transportation							
.32	.12	.05		Soil/Solid Waste Transportation							
.32	.12	.06		D&D Facility Contaminated Equipment/Material Transportation							
.32	.12			Transportation by Rail				.19	.21		Transportation to Storage/Disposal Facility
.32	.13	.01		Removed Drums/Tanks & Misc. Transportation							
.32	.13	.02		Surface Water (Free Product) and Sediments Transportation							
.32	.13	.03		Groundwater (Free Product) Transportation							
.32	.13	.04		Liquid Waste/Sludge (e.g., UST/AST) Transportation							
.32	.13	.05		Soil/Solid Waste Transportation							
.32	.13	.06		D&D Facility Contaminated Equipment/Material Transportation							
.32	.13			Transportation by Barge				.19	.21		Transportation to Storage/Disposal Facility
.32	.14	.01		Removed Drums/Tanks & Misc. Transportation							
.32	.14	.02		Surface Water (Free Product) and Sediments Transportation							
.32	.14	.03		Groundwater (Free Product) Transportation							
.32	.14	.04		Liquid Waste/Sludge (e.g., UST/AST) Transportation							
.32	.14	.05		Soil/Solid Waste Transportation							
.32	.14	.06		D&D Facility Contaminated Equipment/Material Transportation							
.32	.14			Transportation by Air				.19	.21		Transportation to Storage/Disposal Facility
.32	.15			Container Handling				.19	.20		Container Handling
.33	.00			DISPOSAL				.19	.00		DISPOSAL (COMMERCIAL)
.33	.04	.01		Drums/Tanks and Miscellaneous Disposal							
.33	.04	.02		Surface Water (Free Product) and Sediments Disposal							
.33	.04	.03		Groundwater (Free Product) Disposal							

Crosswalk From ECES To HTRW WBS

Lvl	Lvl	Lvl	Lvl	Environmental Management	32			33 & 34			HAZARDOUS, TOXIC, RADIOACTIVE WASTE WORK BREAKDOWN STRUCTURE
2	3	4	5	ENVIRONMENTAL COST ELEMENT STRUCTURE	2nd	3rd	4th	2nd	3rd	4th	
.33	.04	.04		Liquid Waste/Sludge Disposal							
.33	.04	.05		Soil/Solid Waste Disposal							
.33	.04	.06		D&D Facility Contaminated Equipment/Material Disposal							
.33	.04			On-site DOE Disposal Costs, Fees, and Taxes				.19	.22		Disposal Fees and Taxes
.33	.05	.01		Drums/Tanks and Miscellaneous Disposal							
.33	.05	.02		Surface Water (Free Product) and Sediments Disposal							
.33	.05	.03		Groundwater (Free Product) Disposal							
.33	.05	.04		Liquid Waste/Sludge Disposal							
.33	.05	.05		Soil/Solid Waste Disposal							
.33	.05	.06		D&D Facility Contaminated Equipment/Material Disposal							
.33	.05			On-site Commercial Disposal Costs, Fees, and Taxes				.19	.22		Disposal Fees and Taxes
.33	.06	.01		Drums/Tanks and Miscellaneous Disposal							
.33	.06	.02		Surface Water (Free Product) and Sediments Disposal							
.33	.06	.03		Groundwater (Free Product) Disposal							
.33	.06	.04		Liquid Waste/Sludge Disposal							
.33	.06	.05		Soil/Solid Waste Disposal							
.33	.06	.06		D&D Facility Contaminated Equipment/Material Disposal							
.33	.06			Off-site DOE Disposal Costs, Fees, and Taxes				.19	.22		Disposal Fees and Taxes
.33	.07	.01		Drums/Tanks and Miscellaneous Disposal							
.33	.07	.02		Surface Water (Free Product) and Sediments Disposal							
.33	.07	.03		Groundwater (Free Product) Disposal							
.33	.07	.04		Liquid Waste/Sludge Disposal							
.33	.07	.05		Soil/Solid Waste Disposal							
.33	.07	.06		D&D Facility Contaminated Equipment/Material Disposal							
.33	.07			Off-Site Other Government Disposal Costs, Fees, and Taxes				.19	.22		Disposal Fees and Taxes
.33	.08	.01		Drums/Tanks and Miscellaneous Disposal							
.33	.08	.02		Surface Water (Free Product) and Sediments Disposal							
.33	.08	.03		Groundwater (Free Product) Disposal							
.33	.08	.04		Liquid Waste/Sludge Disposal							
.33	.08	.05		Soil/Solid Waste Disposal							
.33	.08	.06		D&D Facility Contaminated Equipment/Material Disposal							
.33	.08			Off-Site Commercial Disposal Costs, Fees, and Taxes				.19	.22		Disposal Fees and Taxes
.34	.00			AIR EMISSION AND OFF-GAS TREATMENT							
.34	.01			Biofiltration							
.34	.02			High Energy Corona							
.34	.03			Turnable Hybrid Plasma Reactor							
.34	.04			Membrane Separation							
.34	.05			Catalytic Oxidation							
.34	.06			Thermal Oxidation							
.34	.07			Ultraviolet Oxidation							
.34	.08			VOC Recovery and Recycle							
.34	.09			Internal Combustion Engine				.12	.14		Vapor Recovery/Reuse (Internal Combustion Engine)
.34	.10			Granular Activated Carbon Absorption-Gases/Vapor				.13	.19		Carbon Adsorption - Gases
.34	.11			Alkali Bed Reactor							
.34	.11			Flameless Thermal Oxidation							
.34	.11			Condensation							
								.16	.00		RESERVED FOR FUTURE USE