ENTERED

Allen, Pam, NMENV

From: Maestas, Ricardo, NMENV
Sent: Monday, August 17, 2015 9:04 AM
To: Allen, Pam, NMENV
Subject: FW: WIPP Recovery Workshop documents
Attachments: WIPP Recovery Workshop - 1-9-15 rev 7.pptx; 3) Summary Schedule_Rev.3_ 10-27-14.pdf; 6) Resource Loaded Schedule Rev.3 as of 10-26-14.pdf

Email and attachments.
Thanks Pam.

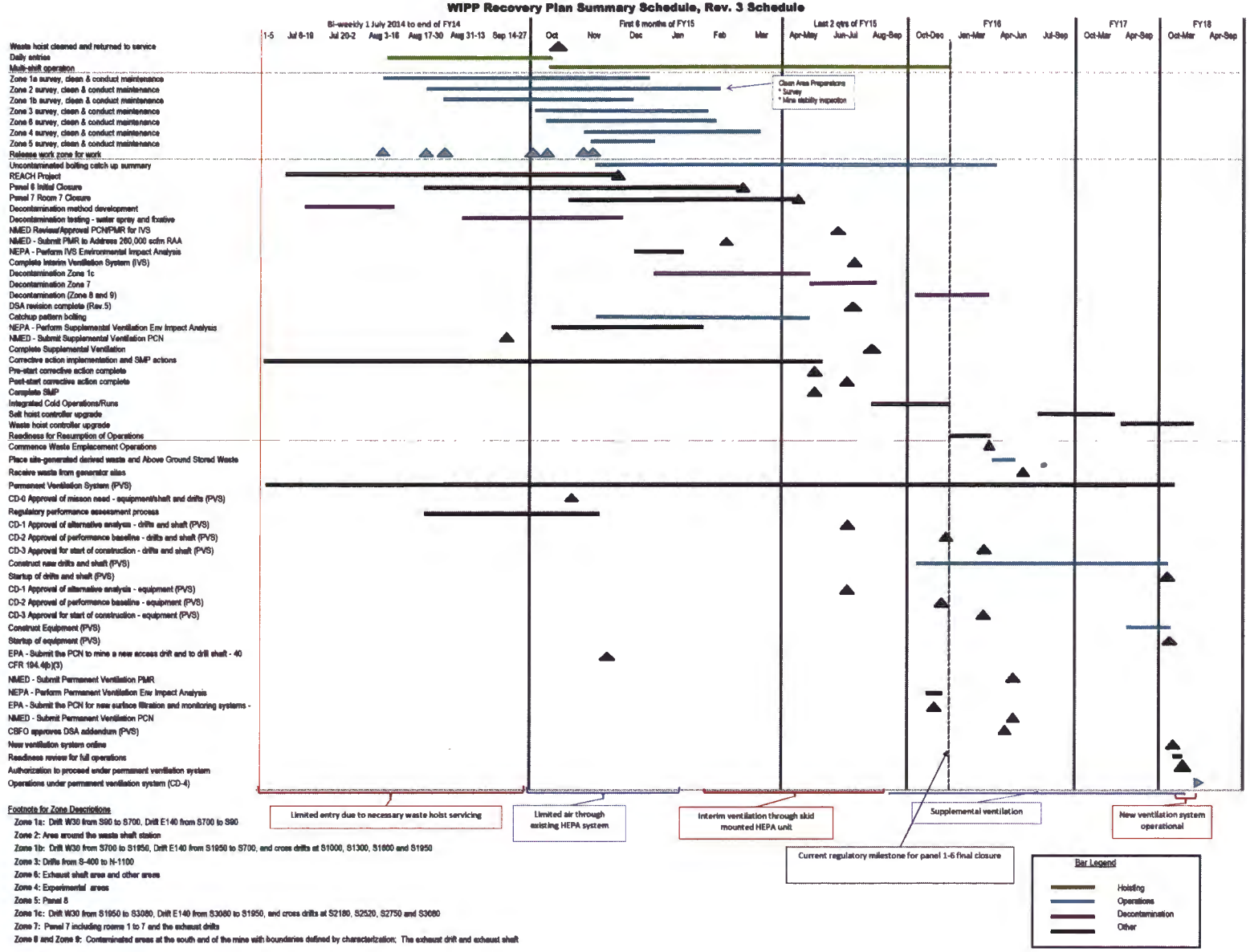
From: George Basabilvazo [mailto:george.basabilvazo@cbfo.doe.gov]
Sent: Monday, January 12, 2015 4:43 PM
To: Kliphuis, Trais, NMENV; Maestas, Ricardo, NMENV; Flynn, Ryan, NMENV; 'Peake, Tom'; Walsh, Jonathan; Stone.Nick@epa.gov
Cc: Russ Patterson; Anthony Stone; Chavez, Rick - RES (Rick.Chavez@wipp.ws); Jose Franco; Susan McCauslin
Subject: WIPP Recovery Workshop documents

Attached please find three documents that are being provided in advance of the WIPP Recovery Workshop scheduled from 8 a.m. to noon at the Skeen Whitlock Building on Wednesday January 14th. Paper copies will be provided to the participants at the Workshop. I would respectfully request that you hold off posting the documents until after the workshop. This Workshop has been discussed at several of the Town Hall meetings.

Best regards,
George

150108

WIPP Recovery Plan Summary Schedule, Rev. 3 Schedule



Footnote for Zone Descriptions

Zone 1a: Drift W30 from S90 to S700, Drift E140 from S700 to S90

Zone 2: Area around the waste shaft station

Zone 1b: Drift W30 from S700 to S1950, Drift E140 from S1950 to S700, and cross drifts at S1000, S1300, S1600 and S1950

Zone 3: Drifts from S-400 to N-1100

Zone 6: Exhaust shaft area and other areas

Zone 4: Experimental areas

Zone 5: Panel 8

Zone 1c: Drift W30 from S1950 to S3080, Drift E140 from S3080 to S1950, and cross drifts at S2180, S2520, S2750 and S3080

Zone 7: Panel 7 including rooms 1 to 7 and the exhaust drifts

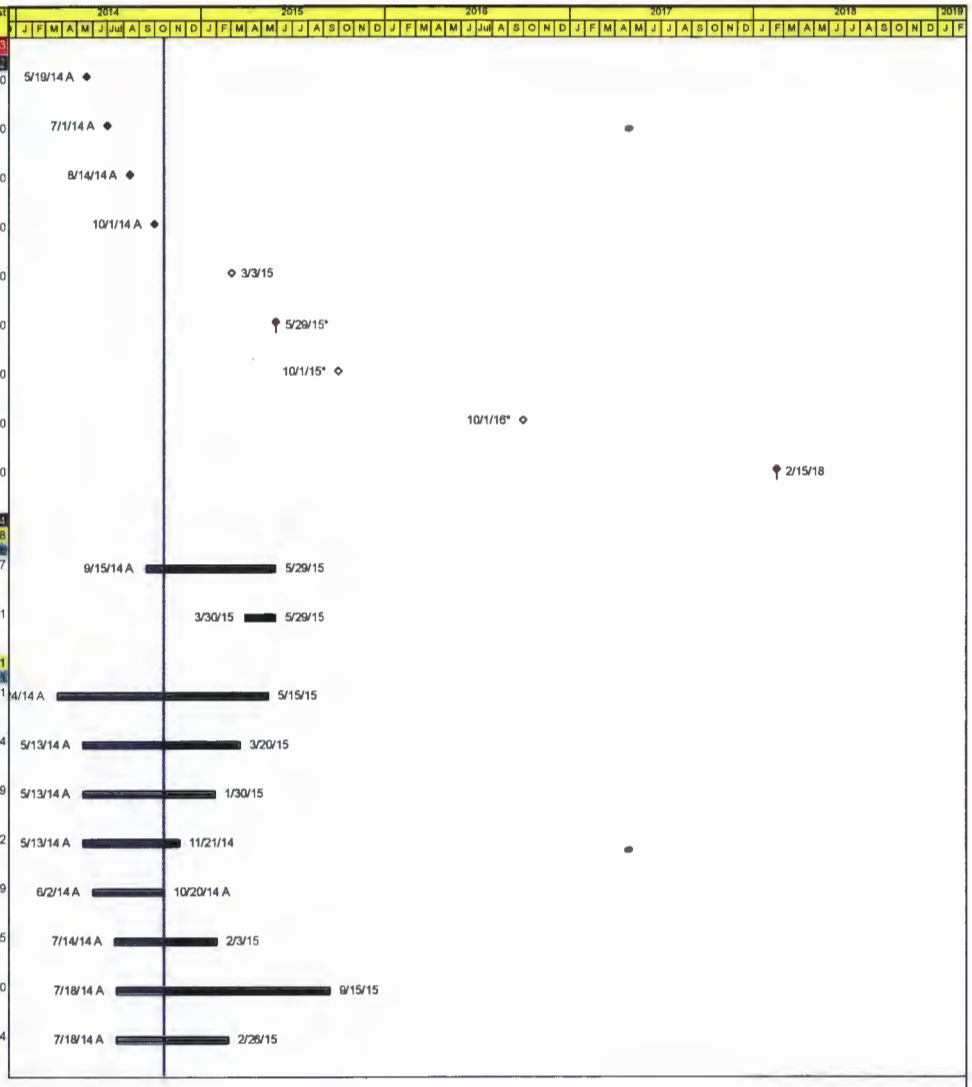
Zone 8 and Zone 9: Contaminated areas at the south end of the mine with boundaries defined by characterization; The exhaust drift and exhaust shaft

Footnote for Permanent ventilation system

Detail activities are located in the "Permanent Vent Sys" Project

Pre-Decisional: Not for public release. Use of, disclosure of, or reliance upon, data contained on this sheet is subject to the restriction on the document title page.

Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
1 TRU Waste		3/24/14 A	2/15/18	950286	$291,491,723
1.7 WIPP Recovery Project		3/24/14 A	2/15/18	946574	$175,844,602
Project Start	Project Start	5/19/14 A		0	$0
SMP Start	Start SMP and Other Documents	7/1/14 A		0	$0
Zone Start	Begin Zone Roll Back	8/14/14 A		0	$0
FY 15 Funding	FY 15 Funding	10/1/14 A		0	$0
Zones Complete	Completion of all Uncontaminated Zone Survey, Cleaning, and Maintenance		3/3/15	0	$0
SMP Complete	SMP and Corrective Actions Complete		5/29/15*	0	$0
FY 16 Funding	FY 16 Funding	10/1/15*		0	$0
FY 17 Funding	FY 17 Funding	10/1/16*		0	$0
Project Complete	Recovery Project Complete		2/15/18	0	$0
1.7.1 Facility Program Enhancements		9/15/14 A	3/31/16	23457	$4,273,149
1.7.1.01 Nuclear Safety Program		9/15/14 A	5/29/15	3284	$578,358
1.7.1.01.01 Nuclear Safety Program Enhancements		9/15/14 A	5/29/15	3284	$578,358
RJON4-1010	Nuclear Safety Program RAD CAP	9/15/14 A	5/29/15	3148	$564,737
NS1000	SMP Line Management Self-Assessment	3/30/15	5/29/15	136	$13,621
1.7.1.02 Emergency Management Program		3/24/14 A	3/31/16	23057	$4,851,751
1.7.1.02.01 Emergency Management Program Enhancements		3/24/14 A	3/31/16	23057	$4,851,751
EMPI-0000	JON # 2 EM Process	3/24/14 A	5/15/15	3713	$337,311
EMPI-0030	JON #9 EM Process	5/13/14 A	3/20/15	313	$81,344
EMPI-0010	JON #5 EM Process	5/13/14 A	1/30/15	750	$172,699
EMPI-0020	JON #6 EM Process	5/13/14 A	11/21/14	253	$74,452
EMPI-0999	EM Phase 1 - FY14	6/2/14 A	10/20/14 A	0	$17,449
EMPI-2000	Phase 2 FY14/FY15 - 1st QTR	7/14/14 A	2/3/15	0	$200,925
EMPI-0025	JON #8 EM Process	7/18/14 A	9/15/15	16	$54,420
EMPI-0040	JON # 11 EM Process	7/18/14 A	2/26/15	1166	$108,864



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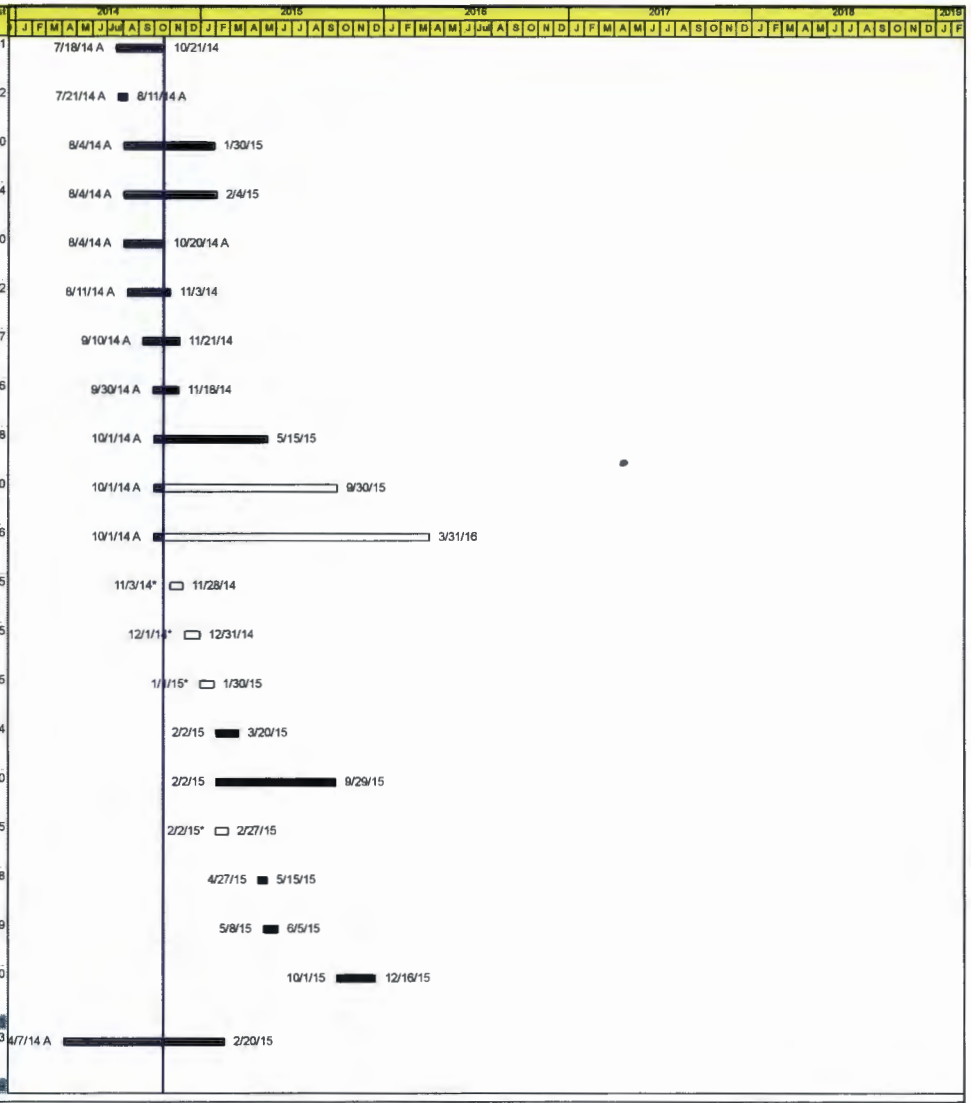
Current Bar Labels ◆ Actual Milesto...
Remaining Work ◆ Critical Waste ...
◇ Milestone Actual Work

Recovery_Resource Loaded Schedule (Does Not Include Escalation)

Status as of: 10/21/14
PRINT DATE: 10/26/14

Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
EMPI-0050	JON #12 EM Process	7/18/14 A	10/21/14	1260	$106,501
EMPI-1007	Develop ICS training strategies and schedule	7/21/14 A	8/11/14 A	200	$42,922
EMPI-2004	Update WP 12-12 Development and Maintenance of an Emergency Planning Hazards Assessment	8/4/14 A	1/30/15	60	$15,130
EMPI-2005	Update WP 12-11 Development and Maintenance of an Emergency Planning Hazards Survey	8/4/14 A	2/4/15	50	$14,204
EMPI-2007	Develop a Standard Operating Guide on the mobile Breathing Air Station	8/4/14 A	10/20/14 A	60	$14,610
EMPI-2013	Develop an ERO Training and Qualification Administrative Procedure	8/11/14 A	11/3/14	60	$99,962
EMPI-2016	Update WP 12-ER3003, Functional Checks of Emergency Management Response Equipment	9/10/14 A	11/21/14	512	$213,297
EMPI-2009	Develop new Emergency Notification Procedure (separate from cal/class)	9/30/14 A	11/18/14	150	$75,216
EMPI-0005	JON #3 EM Process	10/1/14 A	5/15/15	434	$43,468
EMPI-3013	Subcontractor Support FY14 Recovery	10/1/14 A	9/30/15	0	$232,650
EMPI-3014	New Management Support Per Department Reorganization	10/1/14 A	3/31/16	6264	$627,376
EMPI-3012c	Equipment Purchase (Site EOC Furniture)	11/3/14*	11/28/14	0	$52,875
EMPI-3012a	Equipment Purchase (Web EOC)	12/1/14*	12/31/14	0	$137,475
EMPI-3012b	Equipment Purchase (Con-NXT)	1/1/15*	1/30/15	0	$65,565
EMPI-3002	Update WP 12-ER3005, Office Warden Emergency Response Preparation and Implementation.	2/2/15	3/20/15	90	$148,604
EMPI-3000	Phase 3 FY15	2/2/15	9/29/15	30	$9,350
EMPI-3012d	Equipment Purchase (Command Vehicle)	2/2/15*	2/27/15	0	$95,175
EMPI-3011	Conduct training on WP 12-ER3005, Office Warden Emergency Response Preparation and Implementation.	4/27/15	5/15/15	0	$98,348
EMPI-3015	Update Categorization and Classification (WP 12-ER3906) Procedure.	5/8/15	6/5/15	210	$73,379
EMPI-3024a	Phase 3 FY16	10/1/15	12/16/15	360	$85,230
JON2-0000	Emergency Management Fire Cap	4/7/14 A	2/20/15	5582	$429,113



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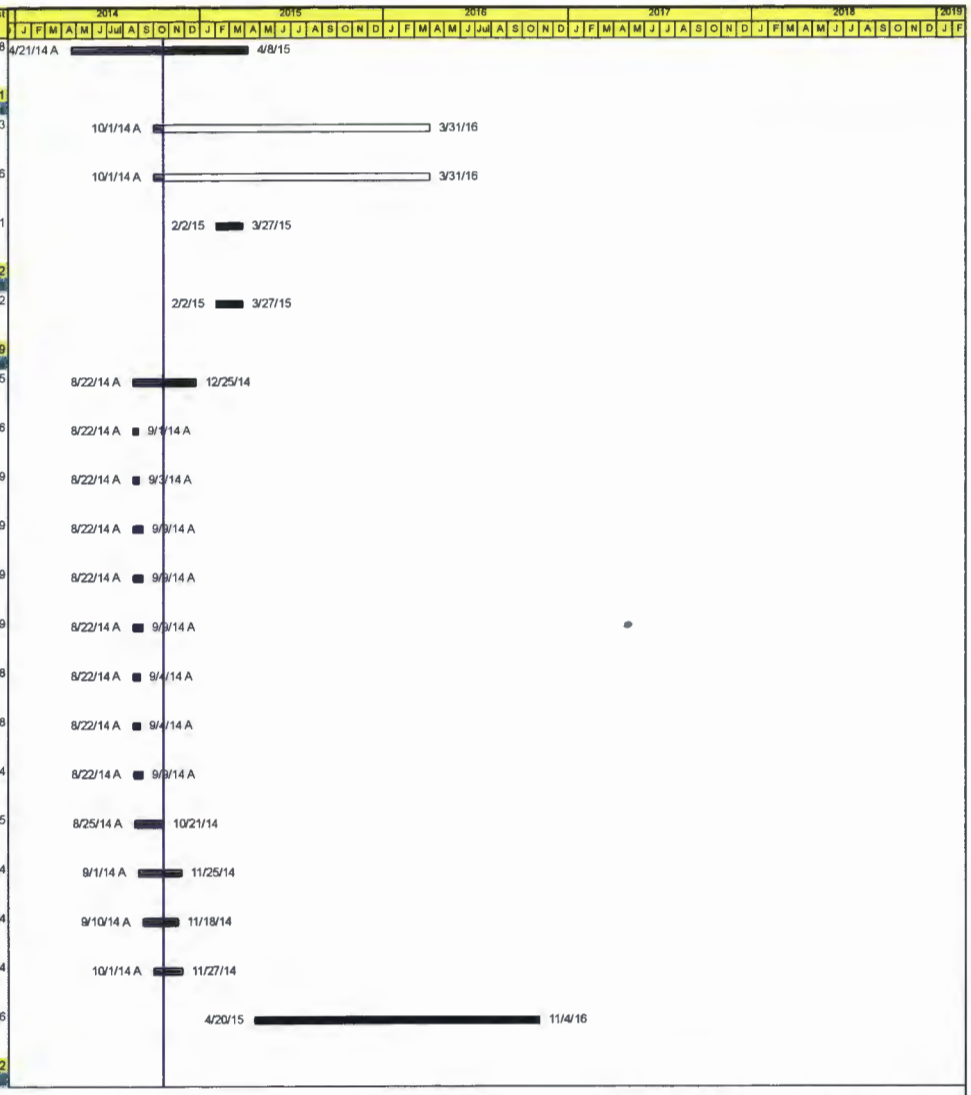
Current Bar Labels ◆ ◆ Actual Milesto...
Remaining Work ◆ ◆ Critical Waste ...
◇ ◇ Milestone Actual Work

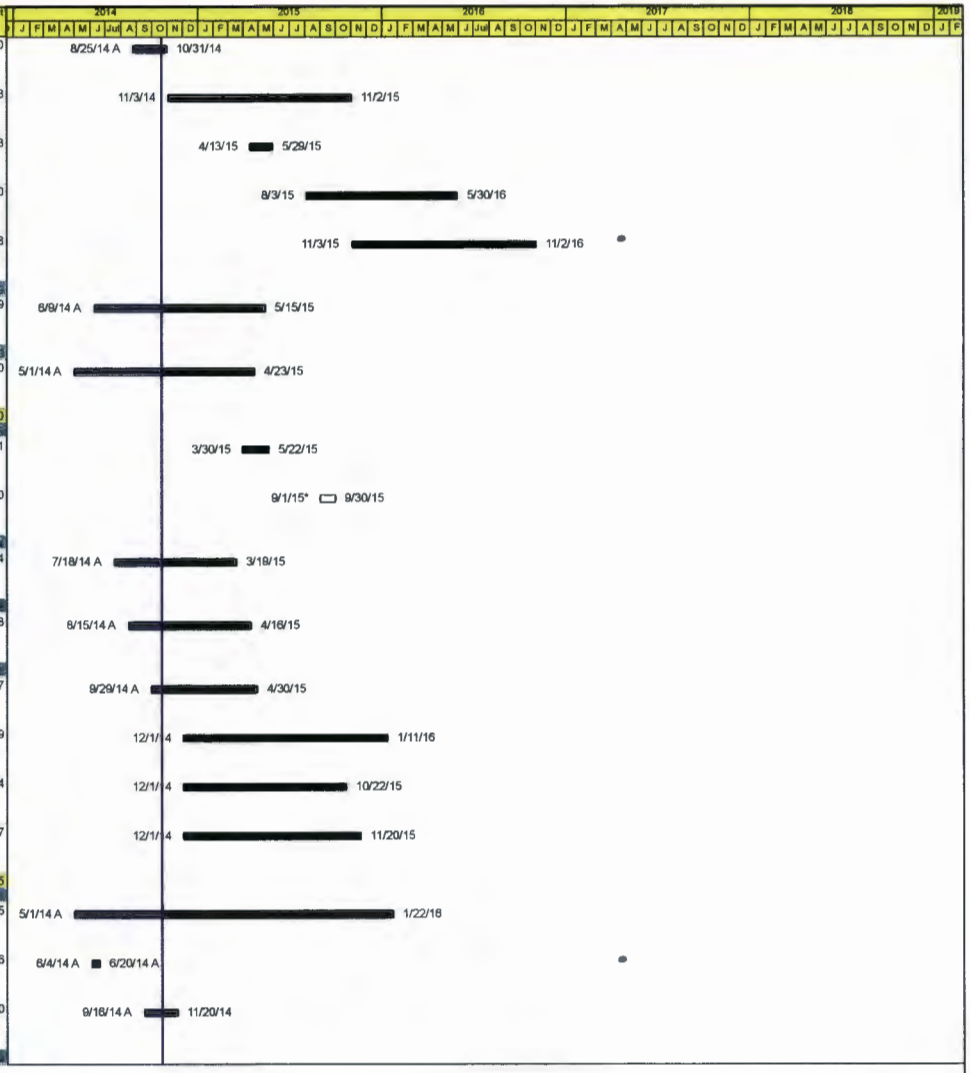
Recovery_Resource Loaded Schedule (Does Not Include Escalation)

Status as of: 10/21/14
PRINT DATE: 10/26/14

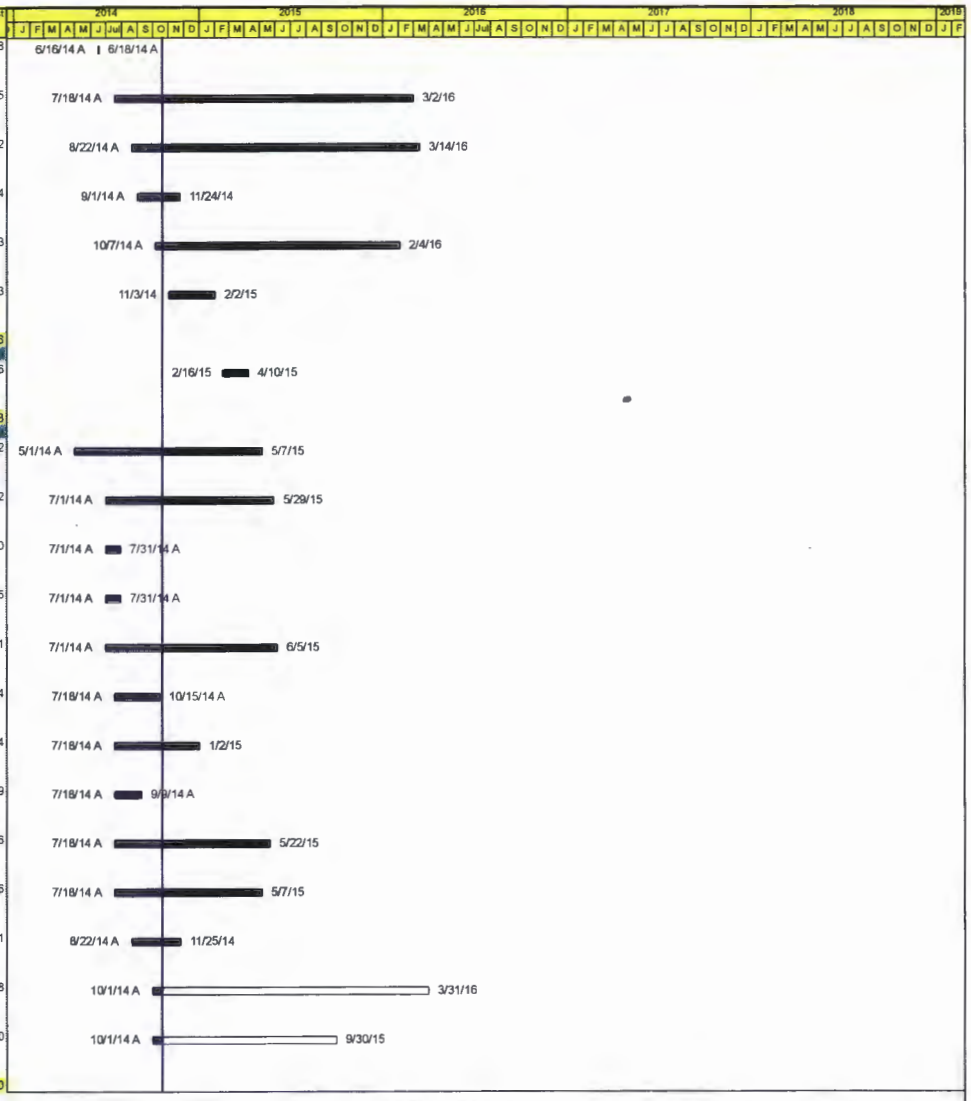
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
RJON14-1020	Emergency Mgmt Program Improvements RAD CAP	4/21/14 A	4/8/15	1524	$1,123,838
1.7.1.03 Radioactive and Hazardous Waste Management Program		**10/1/14 A**	**3/31/16**	**140**	**$597,241**
HM1001	RES Subcontract Support to Manage Additional Waste Types and Flatbed Trailer Monthly Rental Needed for Transporting	10/1/14 A	3/31/16	0	$249,153
HM1002	Subcontract Cost For Rad Waste Disposal and Analytical Laboratory	10/1/14 A	3/31/16	0	$335,756
HM1000	SMP Line Management Assessment	2/2/15	3/27/15	140	$12,331
1.7.1.04 Human Factors Program		**2/2/15**	**3/27/15**	**160**	**$42,462**
HF1000	SMP Line Management Self-Assessment	2/2/15	3/27/15	160	$42,462
1.7.1.05 Testing/Surveillance/Maintenance Program		**8/22/14 A**	**11/4/16**	**46406**	**$3,677,559**
WC1030	Evaluate current standing AJHAs for Maintenance and evaluate a process for trending of deficiencies - Budget Activity	8/22/14 A	12/25/14	3488	$284,615
WC1040	Revise Work Control procedure (WP 10-WC3011) and evaluate a process for trending of deficiencies	8/22/14 A	9/1/14 A	888	$60,516
WC1050	Development of the Plan of the Month, Plan of the Week, Plan for Tomorrow, and Plan of the Day	8/22/14 A	9/3/14 A	1128	$89,989
WC1080	Revise WP 10-AD3028, Calibration and Control of Measurement and Test Equipment (MTE)	8/22/14 A	9/9/14 A	816	$65,099
WC1100	Revise all CHAMPS calibration activities to calculate the next due date based on a float approach	8/22/14 A	9/9/14 A	1366	$85,149
WC1110	Update CHAMPS Preventive Maintenance (Type 2)	8/22/14 A	9/9/14 A	882	$54,979
WC1120	Revise the Preventive Maintenance procedure (WP 10-WC3010) to include a process for trending of deficiencies	8/22/14 A	9/4/14 A	1260	$85,868
WC1130	Develop New Guide for Decision on Preventive Maintenance/Calibration activities (WP 10-WC30xx)	8/22/14 A	9/4/14 A	1260	$85,868
WC1090	Revise WP 10-WC3029, Calibration and Control of Monitoring and Data Collection Equipment (MDE)	8/22/14 A	9/9/14 A	1224	$83,414
WC14790	Underground and Surface Vehicle/Equipment Procedures Revisions (JON13-1010)	8/25/14 A	10/21/14	2661	$233,685
WC1160	Review PM procedures for mobile surface vehicles - budget activity	9/1/14 A	11/25/14	17931	$1,401,194
WC1140	All Engineering Identify safety related equipment in the master equipment list (MEL)/component indices in Champs	9/10/14 A	11/18/14	2670	$251,404
WC1150	Review PM procedures for mobile underground vehicles to ensure requirements flow down/incorporation -	10/1/14 A	11/27/14	1884	$188,694
WC1360	Develop plan for procurement of replacement CMMS to include performance of an assessment of needs	4/20/15	11/4/16	8948	$707,086
1.7.1.06 Conduct of Operations Program		**5/1/14 A**	**11/2/16**	**60266**	**$10,596,002**



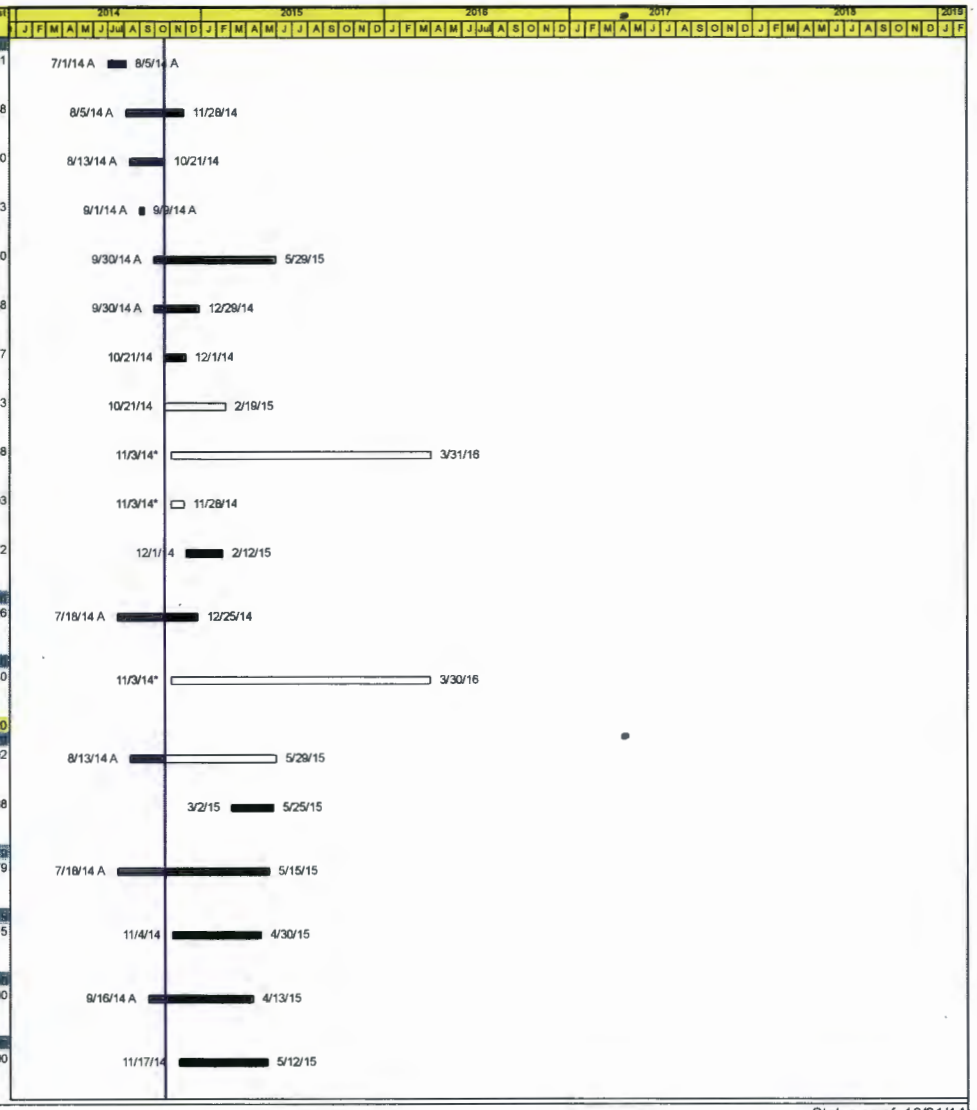
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
COP1010	Establish ConOps Mentoring Program	8/25/14 A	10/31/14	0	$317,250
COP1020	ConOps Mentoring Program	11/3/14	11/2/15	20880	$3,511,253
COP1000	SMP Line Management Assessment and Corrective Actions	4/13/15	5/29/15	5520	$530,183
IPL1280	Upgrade Central Monitoring Room	8/3/15	5/30/16	0	$2,000,000
COP1030	ConOps Mentoring Program	11/3/15	11/2/16	20880	$2,718,128
JON2-0001	Conduct of Operations Fire Cap	6/9/14 A	5/15/15	10982	$1,340,759
RJON27-1000a	Conduct of Operations RAD CAP	5/1/14 A	4/23/15	2004	$178,430
1.7.1.07 Fire Protection Program		7/18/14 A	1/11/16	5136	$4,862,190
FP1000	SMP Line Management Self-Assessment	3/30/15	5/22/15	200	$20,031
IPL1300	UG Fire Protection System	9/1/15*	9/30/15	0	$1,000,000
JON2-0002	Fire Protection Fire Cap	7/18/14 A	3/19/15	2140	$561,064
FPI1000	Fire Protection Improvement - Budget Activity	8/15/14 A	4/16/15	1216	$90,498
FPI1026	Design/procure and upgrade to the above ground PA system - Summary	9/29/14 A	4/30/15	340	$322,397
FPI1023	Design/procure a new smoke sampling detection system for the U/G - Summary	12/1/14	1/11/16	520	$789,659
FPI1024	Design/procure a ne electronic tracking system for personnel in the U/G - Summary	12/1/14	10/22/15	360	$1,302,874
FPI1025	Determine the U/G wireless needs and install the necessary network - Summary	12/1/14	11/20/15	360	$775,667
1.7.1.08 Procedures and Training Program		5/1/14 A	3/14/16	13776	$3,379,925
Prcd-1022	Address Emergent Procedures for Facility Operations	5/1/14 A	1/22/16	0	$898,875
Prcd-1060	Conduct a DOE STD Principles for Procedure System Management Assessment	6/4/14 A	6/20/14 A	0	$52,346
JON2-0003	Procedures and Training Fire Cap	9/16/14 A	11/20/14	0	$105,750



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
Train-1110	Conduct a DOE-STD-1070-94 Assessment for Training	6/16/14 A	6/18/14 A	0	$26,438
Train-1000	Provide Training to Facility Operations for Emergent Issues	7/18/14 A	3/2/16	0	$898,875
Train-1006	NWP Training and Procedures Management	8/22/14 A	3/14/16	3312	$275,382
Train-1085	Augment NWP Training Staff	9/1/14 A	11/24/14	528	$41,594
Train-1035	Additional Training Support	10/7/14 A	2/4/16	9936	$836,383
Train-1080	Augment training admin to support imp. of LMS and additional activities associated with more and frequent training	11/3/14	2/2/15	0	$244,283
1.7.1.09 Quality Assurance Program		**2/16/15**	**4/10/15**	**1000**	**$100,156**
QA1000	SMP Line Management Self-Assessment	2/16/15	4/10/15	1000	$100,156
1.7.1.10 Radiation Protection Program		**5/1/14 A**	**3/31/16**	**28303**	**$6,014,818**
RJON34-1000a	Radiation Protection RAD CAP	5/1/14 A	5/7/15	3160	$1,273,802
RADC1010	10CFR835 Assessment Actions (Revise Programmatic Procedures)	7/1/14 A	5/29/15	3415	$303,182
RADC1150	Develop Process to Store, Ship and Receive Potentially Contaminated Respirators and PC's	7/1/14 A	7/31/14 A	44	$3,510
RADC1160	Rad Con support develop Process to Store, Release and Control Potentially Contaminated Materials and Equipment	7/1/14 A	7/31/14 A	21	$1,675
RADC1015	Procurement and Installation of Network Software	7/1/14 A	6/5/15	480	$32,711
RADC1090	Procure Additional Portable Instruments to Support Staffing	7/18/14 A	10/15/14 A	37	$1,744
RADC1100	Procure Alpha Spectroscopy System	7/18/14 A	1/2/15	520	$27,134
RADC1130	Train New RWP/Work Planner While Chafin is on Contract	7/18/14 A	9/9/14 A	399	$18,609
RADC1045	Upgrading Incumbent Knowledge / Training	7/18/14 A	5/22/15	16440	$811,866
RADC0999	Rad Event AI CAP Development and Resolution	7/18/14 A	5/7/15	175	$16,626
RADC1030	Procure Canberra Horizon Software (Network CAM's/H&F/PCM's)	8/22/14 A	11/25/14	480	$37,771
RADC1170	Additional Management Support Per Department Reorganization	10/1/14 A	3/31/16	3132	$313,688
RADC1180	Recovery Subcontract Support/Mentoring-FY14	10/1/14 A	9/30/15	0	$3,172,500
1.7.1.11 Industrial Safety Program		**7/1/14 A**	**3/31/16**	**11240**	**$1,384,350**



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
ISIH1040	QPS/IS&H/IT Identify location(s) for monitoring equipment	7/1/14 A	8/5/14 A	624	$49,781
ISIH1050	Procure equipment (Minin Rae & Voyager)	8/5/14 A	11/28/14	216	$19,478
ISIH1069	Identify full-face respirator w/ better peripheral visibility and Work w/Mining to determine suitability	8/13/14 A	10/21/14	640	$54,970
ISIH1000	Heat Stress procedure development and approval	9/1/14 A	9/9/14 A	160	$9,973
ISIH2005	Perform walk down with zones	9/30/14 A	5/29/15	1920	$192,080
ISIH3000	Correct safety deficiencies	9/30/14 A	12/29/14	2880	$288,038
ISIH1090	Purchase equipment (hardhat & cap lamp)	10/21/14	12/1/14	176	$17,627
ISIH3015	Subcontract/Mentoring Support for Recovery	10/21/14	2/19/15	0	$79,313
ISIH3005	Additional Industrial Hygienist Support for Recovery	11/3/14*	3/31/16	3132	$313,688
ISIH3010	Receipt of Material Purchases (MiniRae, Full-Face Respirators, Hardhats & Cap Lamps)	11/3/14*	11/28/14	0	$218,903
ISIH1060	Install equipment	12/1/14	2/12/15	1104	$110,572
JON2-0004	Industrial Safety Fire Cap	7/18/14 A	12/25/14	388	$29,926
ISIH4000	Procure Personal Protective Equipment for the Site Recovery Effort	11/3/14*	3/30/16	0	$0
1.7.1.12 Engineering Program		7/18/14 A	5/29/15	19355	$5,731,020
EP1000	Engineering CAPs	8/13/14 A	5/29/15	12000	$2,102,702
EP1001	SMP Line Management Self-Assessment	3/2/15	5/25/15	1030	$94,838
JON2-0005	Engineering Program Support Fire Cap	7/18/14 A	5/15/15	3590	$341,379
IPL1340	Cleaning System for UG Equipment	11/4/14	4/30/15	1380	$138,215
IPL1370	Design and Install CAMs	9/16/14 A	4/13/15	0	$634,500
IPL1380	Upgrade Bulkhead Regulators	11/17/14	5/12/15	0	$1,000,000



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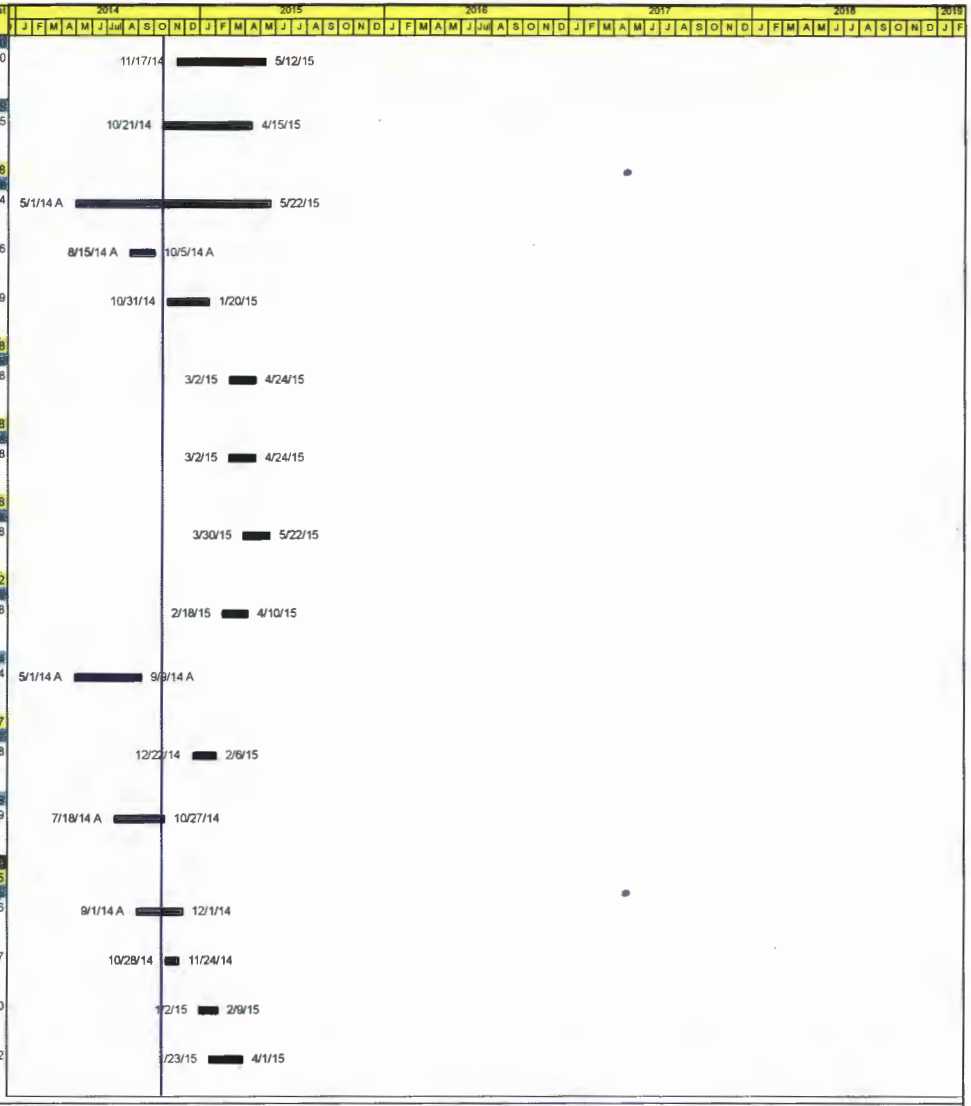
Recovery_Resource Loaded Schedule (Does Not Include Escalation)

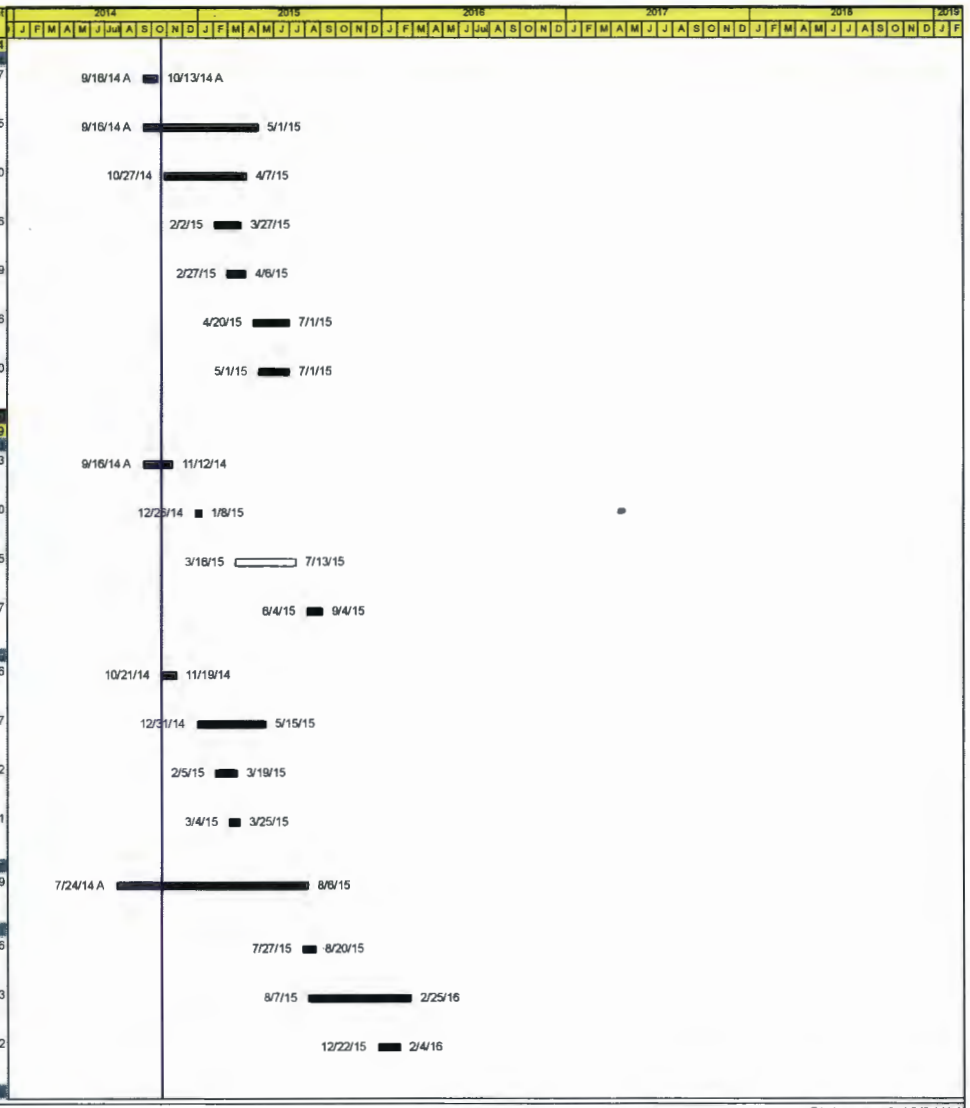
Status as of: 10/21/14

PRINT DATE: 10/26/14

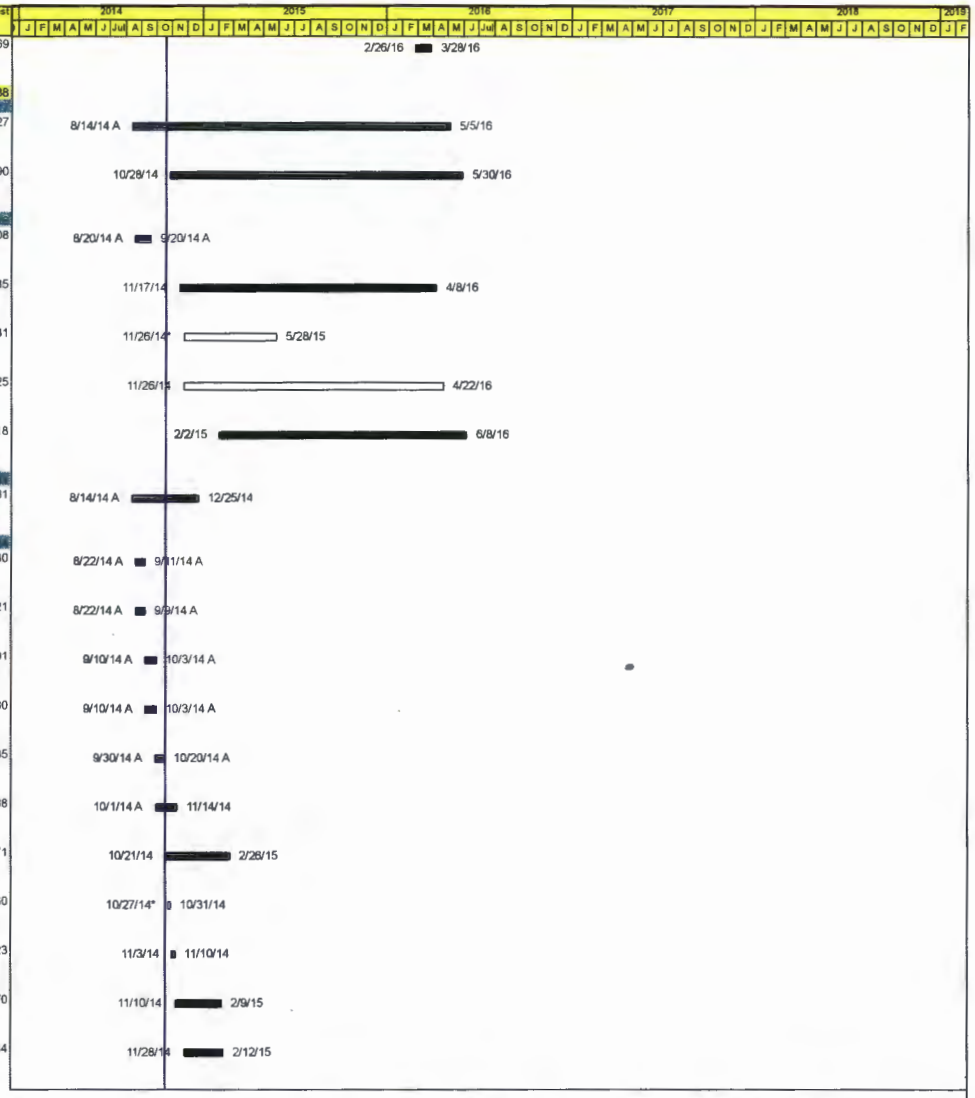
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
IPL1360	UG Ventilation control Door Actuators	11/17/14	5/12/15	0	$1,000,000
ENGDD-1222	Bypass Damper Design	10/21/14	4/15/15	1355	$419,385
1.7.1.13 Contractor Assurance Program		**5/1/14 A**	**5/22/15**	**26796**	**$4,173,878**
CA-1999	SMP Assessments and Evaluations	5/1/14 A	5/22/15	24244	$3,917,824
CA-0999	Fire Event CAP Actions for CAS	8/15/14 A	10/5/14 A	1342	$141,066
CA-3999	Issues Management Training - GM 1020	10/31/14	1/20/15	1210	$114,989
1.7.1.14 Hazardous Material Protection Program		**3/2/15**	**4/24/15**	**1030**	**$94,838**
HM_2610	SMP Line Management Assessment	3/2/15	4/24/15	1030	$94,838
1.7.1.15 Decontamination and Decommissioning Program		**3/2/15**	**4/24/15**	**1030**	**$94,838**
HM_2611	SMP Line Management Self-Assessment	3/2/15	4/24/15	1030	$94,838
1.7.1.16 Criticality Safety Program		**3/30/15**	**5/22/15**	**1030**	**$94,838**
NS_2500	SMP Line Management Self-Assessment	3/30/15	5/22/15	1030	$94,838
1.7.1.17 Integrated Safety Management System Program		**5/1/14 A**	**4/10/15**	**1150**	**$103,142**
ISMS3005	SMP Line Management Self-Assessment	2/16/15	4/10/15	1030	$94,838
1.7.1.17.01.05 Radiological Release Event CAP Corrective Actions		**5/1/14 A**	**9/9/14 A**	**120**	**$8,304**
RJON24-1029	Integrated Safety Mgmt System Program RAD CAP	5/1/14 A	9/9/14 A	120	$8,304
1.7.1.18 Work Control Program		**7/18/14 A**	**2/6/15**	**10330**	**$875,587**
WCP_3000	SMP Line Management Self-Assessment	12/22/14	2/6/15	1030	$94,838
1.7.1.18.01.02 Fire Event Cap Corrective Actions		**7/18/14 A**	**10/27/14**	**9300**	**$780,749**
JON2-0006	Work Control Program Fire Cap	7/18/14 A	10/27/14	9300	$780,749
1.7.3.02 Evaluation of the Safety of the Situation (ESS) Revisions		**9/1/14 A**	**4/1/15**	**320**	**$235,815**
ESS2805	ESS-09 Revision 1 to Panel 6, Panel 7 Room 7	9/1/14 A	12/1/14	80	$58,546
ESS2915	ESS-10 Revision 0 IVS Construction	10/28/14	11/24/14	80	$110,167
ESS3055	ESS-10 Revision 1 IVS Tie-in, Testing	1/2/15	2/9/15	80	$59,090
ESS3190	ESS-2015-01 Install/Test/Operate SVS	1/23/15	4/1/15	80	$8,012



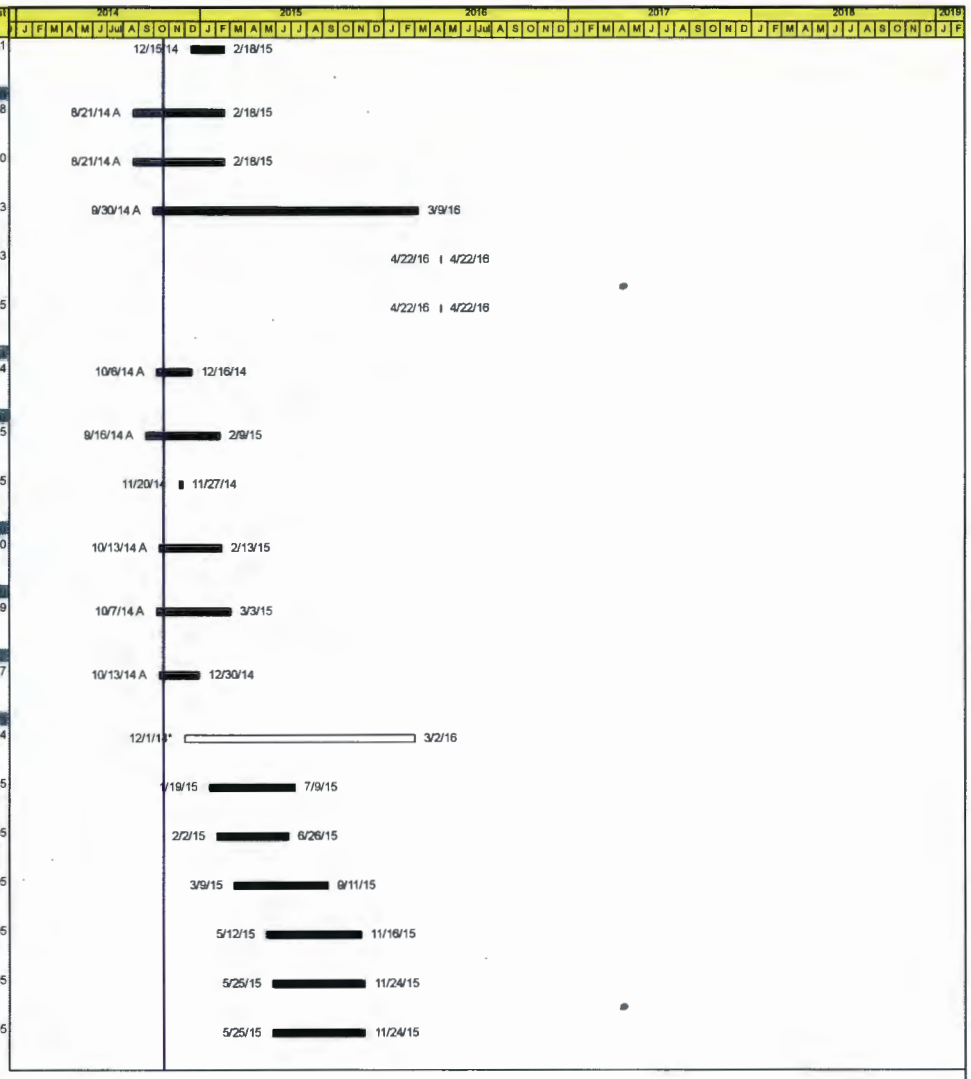
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
1.7.3.89 Documented Safety Analysis (DSA) Revision		9/16/14 A	7/1/15	2384	$4,359,734
ISRDSA1010	Chapters 1 & 2	9/16/14 A	10/13/14 A	160	$1,955,167
ISRDA1000	Development & Submittal of WIPP DSA/TSR Revision 5	9/16/14 A	5/1/15	0	$1,021,545
ISRDSA1020	Chapters 3 & 4	10/27/14	4/7/15	0	$0
ISRDSA1040	SMP Chapters 6-17	2/2/15	3/27/15	120	$241,866
ISRDSA1030	Chapter 5/TSR	2/27/15	4/6/15	120	$369,559
ISRDSA3880	DSA Review and Comment Resolution	4/20/15	7/1/15	80	$314,476
ISRDSA3900	DSA Implementation Period	5/1/15	7/1/15	1904	$457,120
1.7.4.01 Decontamination and Remediation		7/24/14 A	3/28/16	237751	$21,400,579
Zone7RM1000a	D&R Startup	9/16/14 A	11/12/14	580	$59,103
Zone7RM1050	Remove Equipment for DeCon of area Zone 7 - Budget Activity	12/29/14	1/8/15	24875	$1,708,990
Zone7RM1280a	Receive D&D equipment	3/16/15	7/13/15	351	$132,705
NEPA1385	Decon- NEPA	8/4/15	9/4/15	0	$95,427
Zone1cCL00	WP Remove and Stage Equipment from Zone 1C	10/21/14	11/19/14	16910	$1,977,096
Zone1cOV0170	Zone 1C Supervisory Watch, Briefings, and Procedure Reviews	12/31/14	5/15/15	11450	$1,381,977
Zone1cCL0100	Prepare Large Equipment for Disposal	2/5/15	3/19/15	6650	$458,922
Zone1cCL000	Zone 1C Survey, Clean, and Conduct Maintenance	3/4/15	3/25/15	27850	$1,896,211
Zone7OV0000	Zone 7 D&R	7/24/14 A	8/6/15	83516	$7,774,589
Zone8CL0	WP Remove Any Stage Equipment Zone 8 D&R	7/27/15	8/20/15	6260	$420,706
Zone8CL00	Zone 8 D&R	8/7/15	2/25/16	47819	$4,693,763
Zone8CL0100	Prepare Large Equipment for Disposal	12/22/15	2/4/16	6650	$458,922



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
Zone9CL1219	Zone 9 D&R	2/26/16	3/28/16	4840	$342,169
1.7.4.02 Underground Stabilization		**6/19/14 A**	**7/6/16**	**223228**	**$20,998,438**
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Hoisting1150a	Hoisting Support	8/14/14 A	5/5/16	11095	$1,151,627
Hoisting 0899	Hoisting Operation	10/28/14	5/30/16	63580	$3,680,490
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Bolting10000	WP Bolting	8/20/14 A	9/20/14 A	195	$15,208
Bolting10010	Uncontaminated Bolting Catch-up	11/17/14	4/8/16	14700	$1,131,435
Bolting10025	Pattern Bolting Catch-up - Budget Activity	11/26/14*	5/28/15	7545	$828,031
Bolting10070	Bolting Support	11/26/14	4/22/16	11100	$1,407,525
Bolting10040	Contaminated Bolting Catch-up	2/2/15	6/8/16	5400	$504,318
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Zone1aCL1019	Zone 1a Survey, Clean, and Conduct Maintenance	8/14/14 A	12/25/14	3258	$304,981
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Zone1aCL1120	WP (Type 3) Clean Soot - General Cleaning Zone 1a	8/22/14 A	9/11/14 A	46	$3,530
Zone3CL1480	WP (Type 3) Clean Soot - General Cleaning Zone 3	8/22/14 A	9/9/14 A	155	$10,621
Zone4CL1720	WP (Type 3) Clean Soot - General Cleaning Zone 4	9/10/14 A	10/3/14 A	115	$9,191
Zone6CL1270	WP (Type 3) Clean Soot - General Cleaning Zone 6	9/10/14 A	10/3/14 A	95	$7,530
Zone1aCL1130	WP Clean Soot - Electrical Cleaning (Equipment, switches) Zone 1a	9/30/14 A	10/20/14 A	78	$7,535
Zone1aCL1029	Clean Soot - Zone 1A	10/1/14 A	11/14/14	962	$67,438
Zone4CL1769	Clean Soot - Zone 4	10/21/14	2/26/15	6310	$406,271
Zone2CL1310	WP Clean Soot - Electrical Cleaning (Equipment, switches) Zone 2	10/27/14*	10/31/14	0	$0
Zone2CL1260	WP (Type 3) Clean Soot - General Cleaning Zone 2	11/3/14	11/10/14	235	$21,423
Zone3CL1539	Clean Soot - Zone 3	11/10/14	2/9/15	8620	$561,970
Zone6CL1319	Clean Soot - Zone 6	11/28/14	2/12/15	1420	$101,644



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
Zone2CL1319	Clean Soot - Zone 2	12/15/14	2/18/15	1840	$128,281
Zone2CL1231	Interceptor Tank Assessment Zone 2	8/21/14 A	2/18/15	1000	$59,558
Zone2CL1229	Zone 2 Survey, Clean, and Conduct Maintenance	8/21/14 A	2/18/15	4391	$453,020
BW1010	Containerize Decon Water	9/30/14 A	3/9/16	0	$26,833
BW1170	Establish off site disposal pick up with Veolia	4/22/16	4/22/16	0	$41,243
BW1180	If water is not hazardous nor New Mexico special waste but LLW schedule for off site disposal with Energy Solutions.	4/22/16	4/22/16	0	$247,455
Zone1bCL1009	Zone 1b Survey, Clean, and Conduct Maintenance	10/6/14 A	12/16/14	5547	$568,884
Zone3CL1469	Zone 3 Survey, Clean, and Conduct Maintenance	9/16/14 A	2/9/15	6860	$705,115
Zone3CL1468	Zone 3 Perform Forensic Evaluation	11/20/14	11/27/14	0	$74,025
Zone6CL1259	Zone 6 Survey, Clean, and Conduct Maintenance	10/13/14 A	2/13/15	6215	$598,710
Zone4CL1199	Zone 4 Survey, Clean, and Conduct Maintenance	10/7/14 A	3/3/15	5740	$592,059
Zone5CL1259	Zone 5 Survey, Clean, and Conduct Maintenance	10/13/14 A	12/30/14	4365	$466,247
IPL1095	Filter Change Out	12/1/14*	3/2/16	5780	$901,764
BD2000	DOP Test # 1 HEPAs (Bldg 413 and IVS) - WBS	1/19/15	7/9/15	4080	$279,295
BD1000	Changeout # 1 MODS & Highs (Building 413) - WBS	2/2/15	6/26/15	4080	$279,295
BD3009	Install Permacon containments for IVS - WBS	3/9/15	9/11/15	4080	$279,295
BD7000	HEPA Filter Replacement # 1 (7 Year) - WBS	5/12/15	11/16/15	4080	$279,295
BD3000	Changeout # 2 MODS & Highs (Building 413) - WBS	5/25/15	11/24/15	4080	$279,295
BD9000	Changeout # 3 MODS & Highs (IVS) - WBS	5/25/15	11/24/15	4080	$279,295



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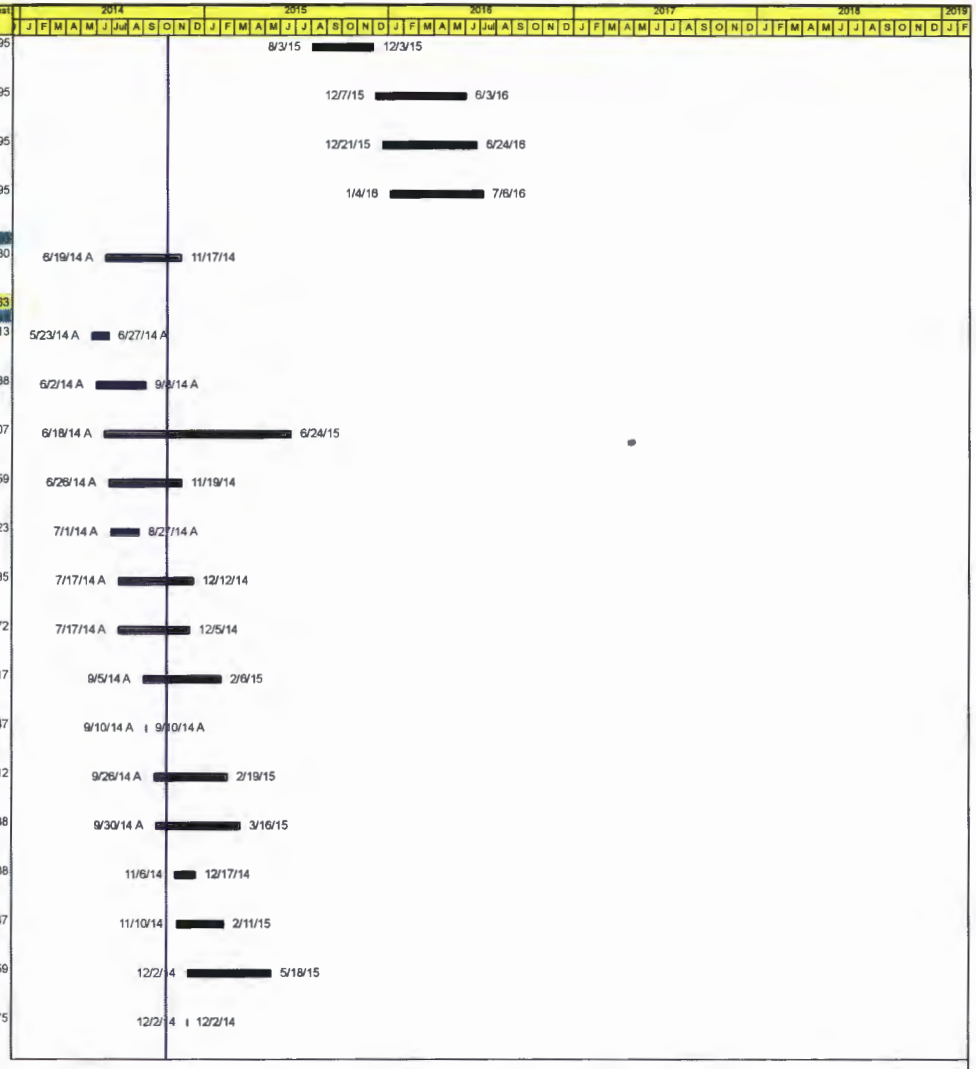
Current Bar Labels ◆ ◆ Actual Milesto...
Remaining Work ◆ ◆ Critical Waste ...
◇ ◇ Milestone Actual Work

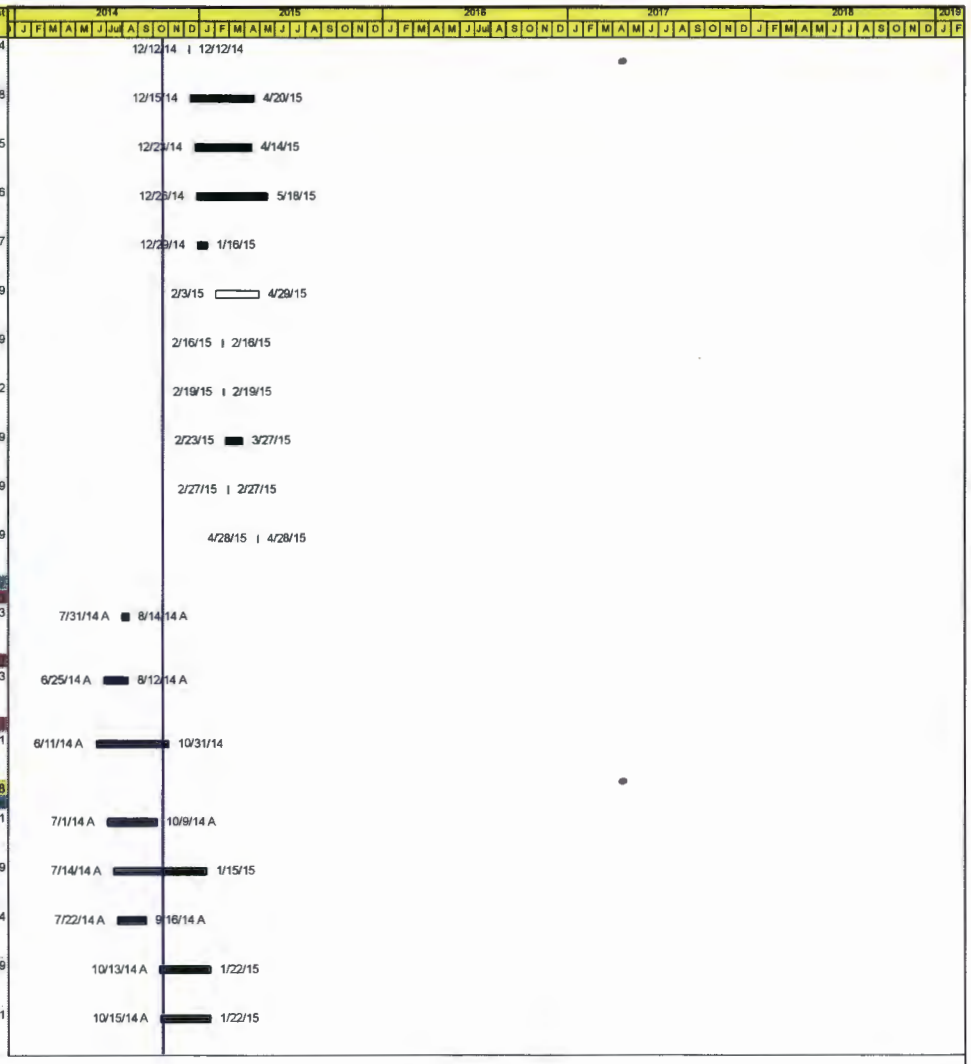
Recovery_Resource Loaded Schedule (Does Not Include Escalation)

Status as of: 10/21/14
PRINT DATE: 10/26/14

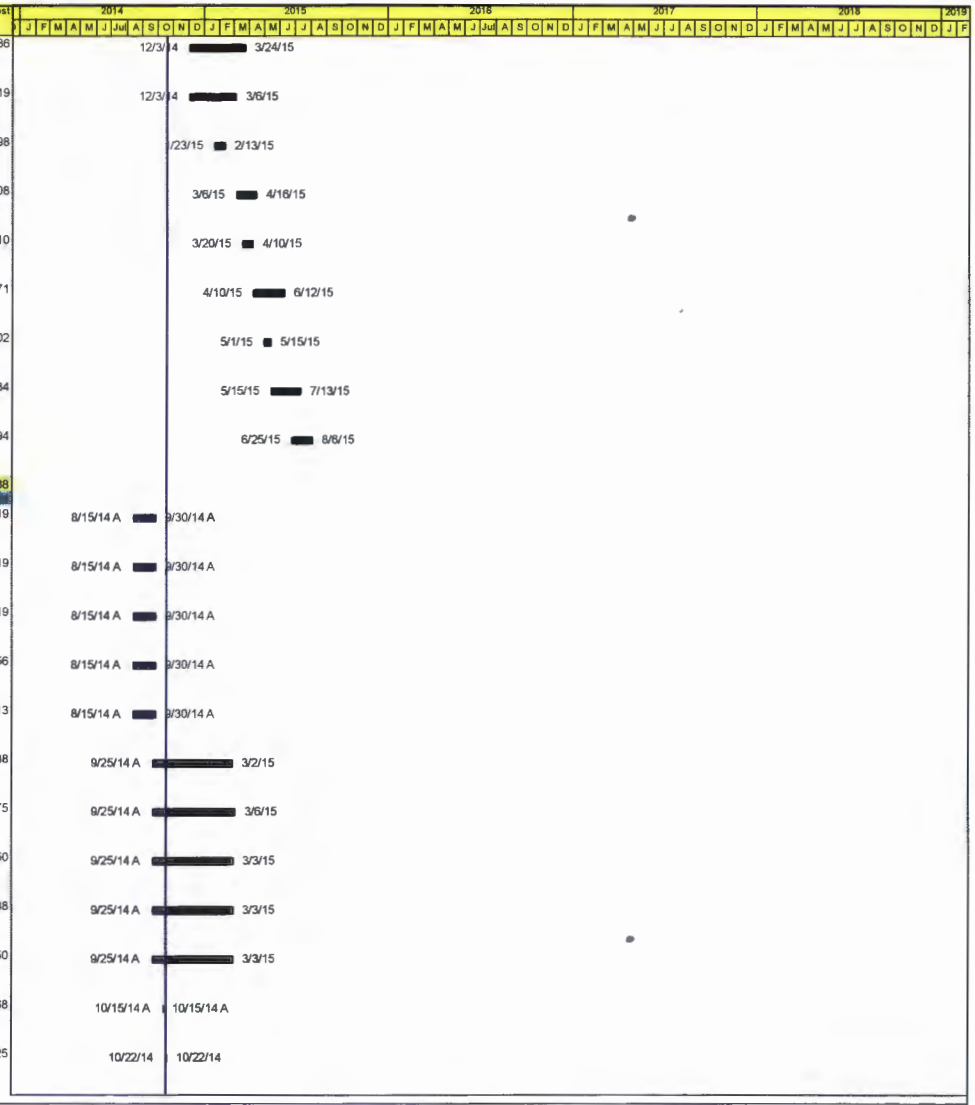
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
BD4000	DOP Test # 2 HEPAs (Bldg 413 and IVS) - WBS	8/3/15	12/3/15	4080	$279,295
BD6000	Changeout # 5 MODS & Highs (IVS) - WBS	12/7/15	6/3/16	4080	$279,295
BD5000	Changeout # 4 MODS & Highs (Building 413) - WBS	12/21/15	6/24/16	4080	$279,295
BD8000	HEPA Filter Replacement # 2 (7 Year) - WBS	1/4/16	7/6/16	4080	$279,295
REACH-0999	Reach Project	6/19/14 A	11/17/14	5782	$3,121,530
1.7.4.03 Interim Ventilation System		**5/23/14 A**	**6/24/15**	**15785**	**$9,213,863**
PM132	Issue Final PXP - Budget Activity	5/23/14 A	6/27/14 A	0	$158,613
IVSPCN1379	Planned Change Notice - Interim Ventilation	6/2/14 A	9/8/14 A	0	$91,188
CL2A1060	Interim Ventilation PMR Process	6/18/14 A	6/24/15	0	$384,507
D0999	IVS Design	6/26/14 A	11/19/14	0	$554,059
IVSPCN1000	Regulatory Review Process - Interim Ventilation	7/1/14 A	8/27/14 A	0	$428,723
P0999	Filter Skids Design - Budget Activity	7/17/14 A	12/12/14	900	$174,735
P1059	PP2 - Fans/VFDs Procurement - Budget Activity	7/17/14 A	12/5/14	360	$116,272
P1089	PP3 Electrical Equipment - Receive Quote - Budget Activity	9/5/14 A	2/6/15	30	$251,417
S1025	Project Management	9/10/14 A	9/10/14 A	3840	$306,347
P1119	Ductwork Procurement - Budget Activity	9/26/14 A	2/19/15	150	$98,112
TmpVS-1630	Design CMS GUI (including Software) - Budget Activity	9/30/14 A	3/16/15	0	$5,288
TmpVS-1530	Design for IVS Duct Demo Budget Activity	11/6/14	12/17/14	2350	$311,338
P1040	PP1- Filter Skids Fabrication - Budget Activity	11/10/14	2/11/15	120	$93,647
C0999	Installation - Budget Activity	12/2/14	5/18/15	1305	$1,169,959
TmpVS-1580	Procure Materials for the Containment for Duct Demo Area on IVS	12/2/14	12/2/14	0	$52,875



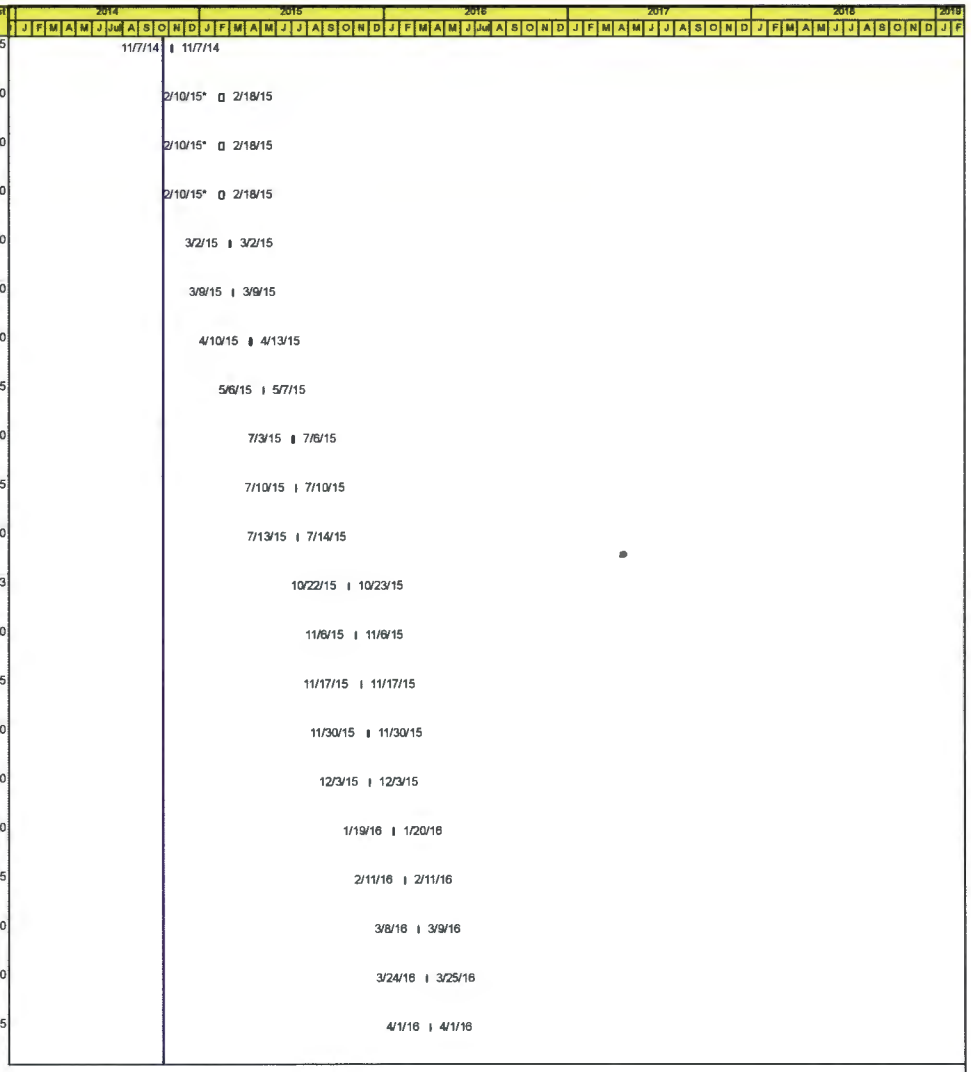
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
P1082	PP2 Fans/VFDs - Received - Budget Activities	12/12/14	12/12/14	0	$1,524,864
P1149	Control Panel/Instruments Procurement - Budget Activity	12/15/14	4/20/15	90	$59,728
TmpVS-2110	Elec Control Panel Switchgear/Conex/Transformer SOW/Doc Prep - IVS - Budget Activity	12/23/14	4/14/15	390	$374,715
S0999	IVS Start-up & Test	12/26/14	5/18/15	0	$81,956
IVSNEPA1389	NEPA - Interim Ventilation	12/29/14	1/16/15	0	$95,427
S1005	LMA Efforts - Support	2/3/15	4/29/15	4450	$445,259
P1112	PP3 Electrical Equipment Received	2/16/15	2/16/15	300	$31,549
P1051a	Receive PP1 Filter Skids	2/19/15	2/19/15	0	$1,345,562
IVSFD1023	Vendor Deliver Equipment/Service - Budget Activity	2/23/15	3/27/15	0	$755,259
P1142	PP4 Ductwork - Received	2/27/15	2/27/15	300	$31,549
P1172	PP5 Control Panel/Instruments Received	4/28/15	4/28/15	300	$31,549
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D159	Elect Swgr/Transformer Design - Budget Activity	7/31/14 A	8/14/14 A	300	$25,573
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D179	Ductwork Design - Budget Activity	6/25/14 A	8/12/14 A	300	$25,573
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D1069	Installation Design - Budget Activity	6/11/14 A	10/31/14	300	$188,221
1.7.4.04 Supplemental Ventilation		7/1/14 A	8/6/15	18122	$4,144,178
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PCNSupVS-1079	Regulatory Review - Supplemental Ventilation	7/1/14 A	10/9/14 A	0	$321,561
SupVS-1017	Procurement Cycle	7/14/14 A	1/15/15	1161	$124,109
SupVS-0999	Evaluate Alternatives and Establish Requirements	7/22/14 A	9/16/14 A	356	$27,834
SupVS-1051	Perform Detailed Design	10/13/14 A	1/22/15	30	$22,639
NPSupVS-1309	NEPA - Supplemental Ventilation	10/15/14 A	1/22/15	70	$227,561



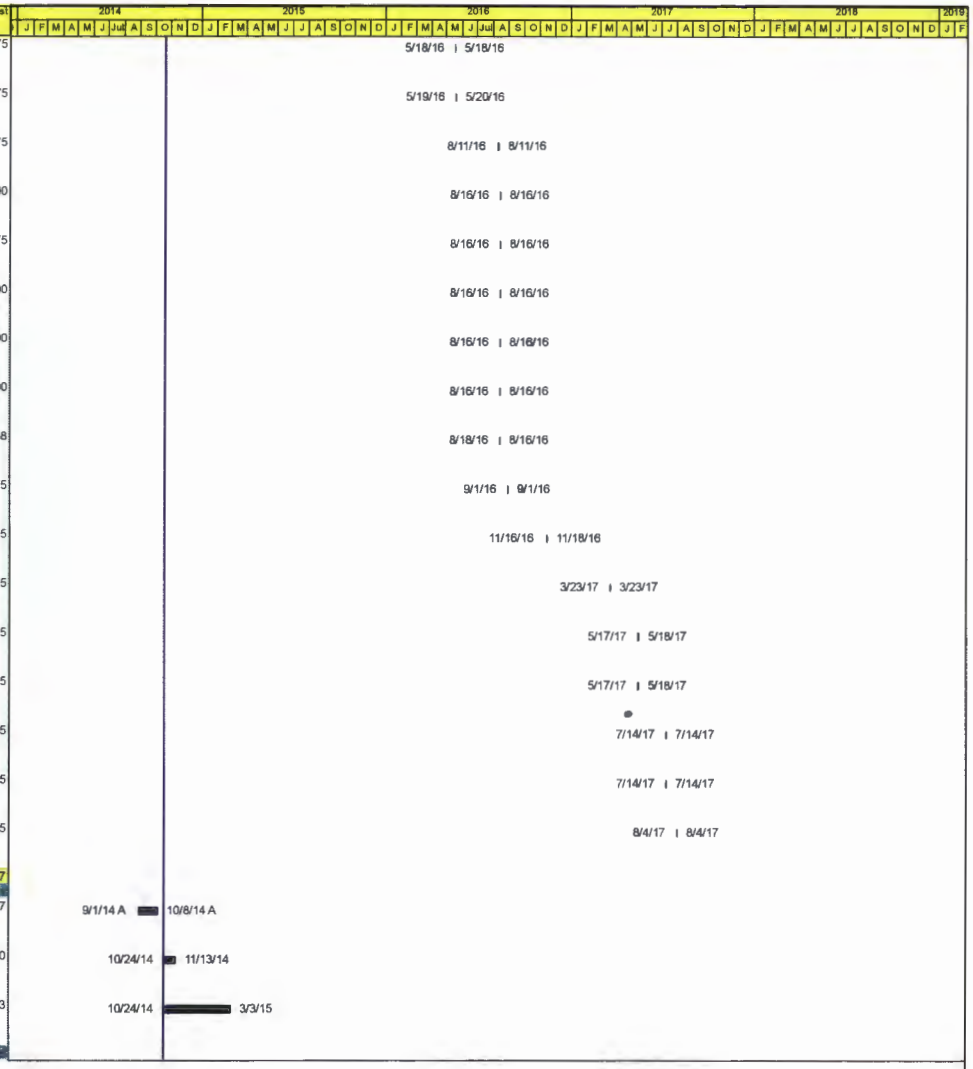
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
SupVS-1126	Procure, Fabricate & Deliver M&S (Material & Supplies) - (Budget Activity)	12/3/14	3/24/15	1220	$1,275,086
PCNSupVS-1255	Planned Change Notice - Supplemental Ventilation	12/3/14	3/6/15	40	$41,019
SupVS-1128a1	Receive O&M Manuals and Spare Parts for Equipment	1/23/15	2/13/15	290	$38,298
SupVS-1128a2	PM screening process per WP10 & Wc3014	3/6/15	4/16/15	200	$19,608
SupVS-1127	Prepare Work Control Documents (WCD)	3/20/15	4/10/15	2100	$209,310
SupVS-1129a1	Procure Construction Contractor and Perform Construction Activities	4/10/15	6/12/15	1080	$372,471
SupVS-1140	Reconfigure U/G	5/1/15	5/15/15	10810	$1,306,902
SupVS-1150	Balance Test & Startup	5/15/15	7/13/15	265	$102,584
SupVS-1200	Readiness Actions	6/25/15	8/6/15	500	$55,194
1.7.4.06 Underground Equipment/Systems		**8/15/14 A**	**8/4/17**	**0**	**$19,695,938**
MERP1739	Procurement of Diesel Filter Additions for the 4 ton Forklift	8/15/14 A	9/30/14 A	0	$13,219
MERP1859	Procurement of Diesel Filter Additions for the LHD	8/15/14 A	9/30/14 A	0	$13,219
MERP1979	Procurement of Diesel Filter Additions for the Lift Truck	8/15/14 A	9/30/14 A	0	$13,219
MERP2099	Procurement of Diesel Filter Additions for the 3 Bolters	8/15/14 A	9/30/14 A	0	$39,656
MERP2109	Diesel Filter Additions for Additional Equipment (LHDs, Haul Trucks, Lift Trucks)	8/15/14 A	9/30/14 A	0	$79,313
MERP3329	Install Automated Fire Suppression System for 3 bolters Summary	9/25/14 A	3/2/15	0	$47,588
MERP3419	Install Automated Fire Suppression System for 6 Haul Trucks	9/25/14 A	3/6/15	0	$95,175
MERP3539	Install Automated Fire Suppression System for 4 LHDs	9/25/14 A	3/3/15	0	$63,450
MERP3659	Install Automated Fire Suppression System for 3 Lift Trucks	9/25/14 A	3/3/15	0	$47,588
MERP3779	Install Automated Fire Suppression System for 4 Forklifts	9/25/14 A	3/3/15	0	$63,450
RER9010	Delivery and Acceptance of Fire Suppression Vehicle (1)	10/15/14 A	10/15/14 A	0	$30,668
RER13770	Delivery and Acceptance of Electric Scissor Lift	10/22/14	10/22/14	0	$31,725



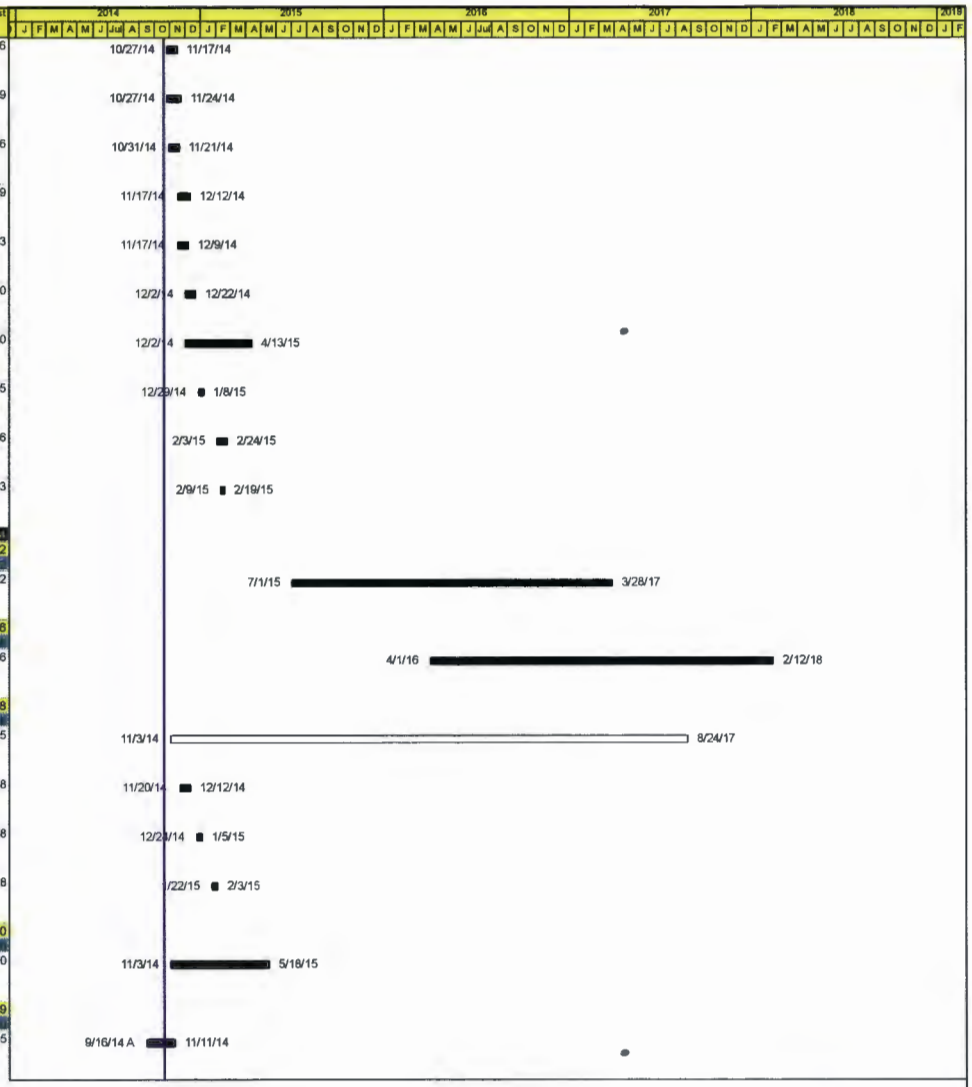
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
RER11030	Delivery and Acceptance of Mobile Soda Blaster	11/7/14	11/7/14	0	$52,875
RER9015	Delivery and Acceptance of Fire Suppression Vehicle (7)	2/10/15*	2/18/15	0	$139,590
RER9020	Delivery and Acceptance of UG Electric Ambulance	2/10/15*	2/18/15	0	$33,840
RER9025	Delivery and Acceptance of Electric UG Rescue Vehicle	2/10/15*	2/18/15	0	$33,840
RER10272	Delivery and Acceptance of 4-ton Forklift	3/2/15	3/2/15	0	$63,450
RER7000	Delivery and Acceptance of 2 Roof Bolters	3/9/15	3/9/15	0	$1,269,000
RER8000	Delivery and Acceptance of 2 PPCs for the New Roof Bolters	4/10/15	4/13/15	0	$274,950
RER10029	Delivery and Acceptance of 2 Lift Trucks	5/6/15	5/7/15	0	$687,375
RER5000	Delivery and Acceptance of Local Filter System for the Active Underground Area	7/3/15	7/6/15	0	$423,000
RER10117	Delivery and Acceptance of PPC for the New Roof Bolters	7/10/15	7/10/15	0	$137,475
RER6000	Delivery and Acceptance of Local Filter System for Contaminated Excavating	7/13/15	7/14/15	0	$423,000
RER10149	Delivery and Acceptance of 3 Face Fans	10/22/15	10/23/15	0	$396,563
RER9000	Delivery and Acceptance of 4 Ton Forklift	11/6/15	11/6/15	0	$63,450
RER11000	Delivery and Acceptance of 15 Electric Carts - Lot 1	11/17/15	11/17/15	0	$222,075
RER10303	Delivery and Acceptance of 6-ton Forklift	11/30/15	11/30/15	0	$84,600
RER11039	Delivery and Acceptance of Mobile Scalar	12/3/15	12/3/15	0	$317,250
RER4000	Delivery and Acceptance of Scrubbers for the Continuous Miner	1/19/16	1/20/16	0	$549,900
RER10241	Delivery and Acceptance of LHD	2/11/16	2/11/16	0	$793,125
RER10334	Delivery and Acceptance of Drill Mounted Scrubbers	3/8/16	3/9/16	0	$592,200
RER10498	Delivery and Acceptance of out-dated Continuous Miner	3/24/16	3/25/16	0	$3,701,250
RER01000	Delivery and Acceptance of Outdated Haul Truck 01	4/1/16	4/1/16	0	$793,125



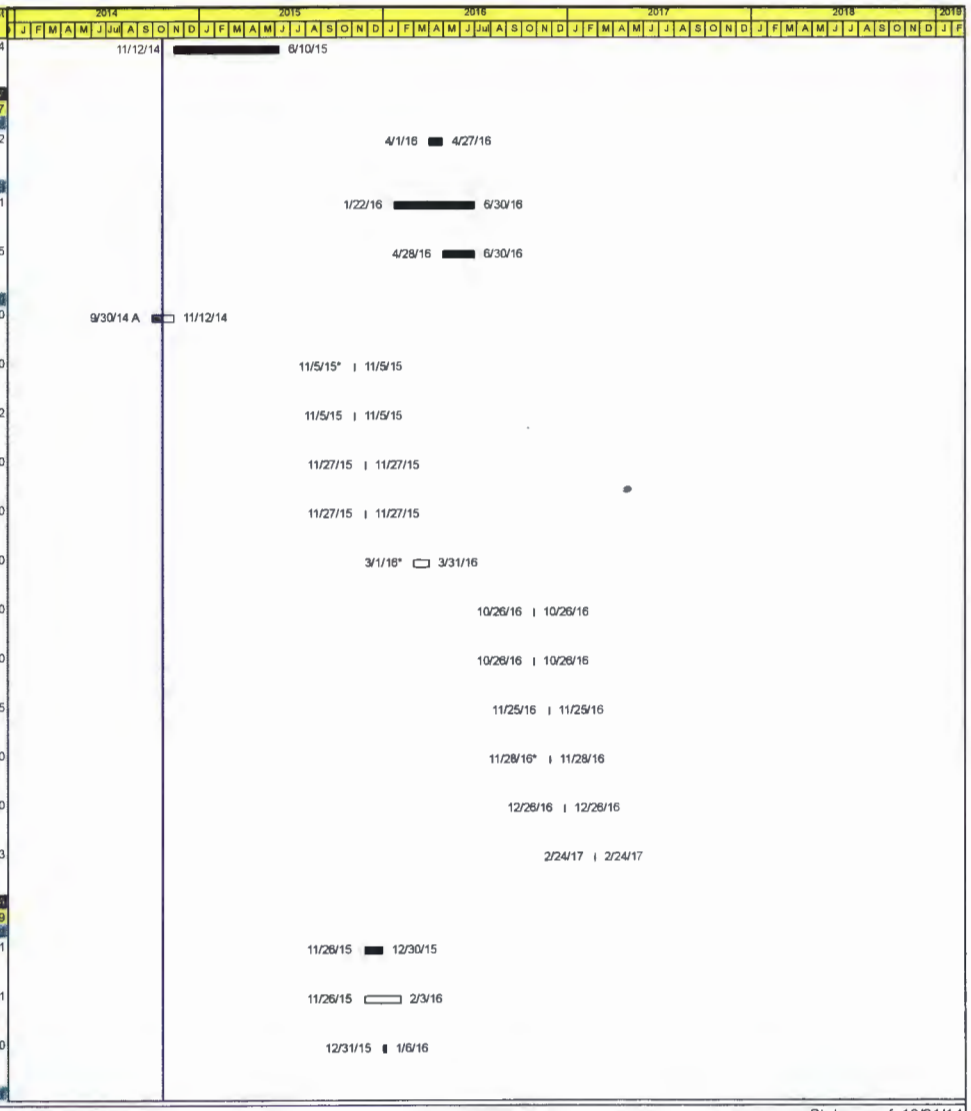
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
RER11010	Delivery and Acceptance of 15 Electric Carts - Lot 2	5/18/16	5/18/16	0	$222,075
RER10179	Delivery and Acceptance of New Scissor Lift	5/19/16	5/20/16	0	$95,175
RER12870	Delivery and Acceptance of Skid Steer Loader	8/11/16	8/11/16	0	$52,875
RER11350	Delivery and Acceptance of Mobile Lift	8/16/16	8/16/16	0	$84,600
RER11650	Delivery and Acceptance of Mobile Generator	8/16/16	8/16/16	0	$264,375
RER11960	Delivery and Acceptance of Kubota Tractor	8/16/16	8/16/16	0	$42,300
RER12270	Delivery and Acceptance of Lube Truck	8/16/16	8/16/16	0	$423,000
RER12570	Delivery and Acceptance of Crane Truck	8/16/16	8/16/16	0	$423,000
RER13470	Delivery and Acceptance of Mobile Simon Lift Platform	8/16/16	8/16/16	0	$89,888
RER13170	Delivery and Acceptance of Ingersoll Air Compressor	9/1/16	9/1/16	0	$52,875
RER11020	Delivery and Acceptance of 15 Electric Carts - Lot 3	11/16/16	11/16/16	0	$222,075
RER10210	Delivery and Acceptance of 3 LHDs	3/23/17	3/23/17	0	$2,379,375
RER10058	Delivery and Acceptance of Borehole Machine A	5/17/17	5/18/17	0	$687,375
RER10087	Delivery and Acceptance of Machine B	5/17/17	5/18/17	0	$687,375
RER2000	Delivery and Acceptance of Outdated Haul Truck 03	7/14/17	7/14/17	0	$793,125
RER10000	Delivery and Acceptance of Outdated Haul Truck 02	7/14/17	7/14/17	0	$793,125
RER3000	Delivery and Acceptance of Outdated Haul Truck 04	8/4/17	8/4/17	0	$793,125
1.7.4.06 Panel/Room Closures		9/1/14 A	4/13/15	9386	$1,217,687
PNL6CL0999	Develop and Submit Nuclear Safety Documentation	9/1/14 A	10/8/14 A	1020	$85,827
NEPA1309	Panel 6 Initial Closure - NEPA	10/24/14	11/13/14	0	$186,710
PNL6CL1020	Perform Panel 6 Initial Closure Activities	10/24/14	3/3/15	3590	$322,363



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
PNL7CL1190	Develop WCD for Installation of Bulkhead	10/27/14	11/17/14	100	$10,016
PNL7CL0999	Develop and Submit Nuclear Safety Documentation	10/27/14	11/24/14	1020	$102,159
PNL7CL1050	Develop WCD# _____ to Make U/G Ventilation Changes	10/31/14	11/21/14	100	$10,016
PNL7CL1240	Develop WCD to Anchor Chainlink and Brattis Cloth, Install Run of Underground Salt and Bulkhead at S-2520	11/17/14	12/12/14	420	$33,189
PNL7CL1226	Build 2 sets of Bulkheads	11/17/14	12/9/14	160	$10,953
NEPA1308	Panel 7 - NEPA	12/2/14	12/22/14	0	$186,710
PNL7CL1020	Perform Panel 7 Room 7 Closure Activities	12/2/14	4/13/15	2306	$202,640
PNL7CL1160	Procure CAMs	12/29/14	1/8/15	420	$42,065
PNL7CL1120	Develop WCD to Run Power to CAMs at Panel 7 Room 7 and Install CAMs	2/3/15	2/24/15	100	$10,016
PNL7CL1180	Develop/Issue Procedures for CAM Operation and Response	2/9/15	2/19/15	150	$15,023
1.7.5.01 Salt Hoist Controller Upgrade		7/1/15	3/28/17	0	$1,096,362
SHUP1000	Salt Hoist Controller Upgrade Design & Procurement	7/1/15	3/28/17	0	$1,096,362
1.7.5.02 Waste Hoist Controller Upgrade		4/1/16	2/12/18	0	$1,315,636
WHUP1000	Waste Hoist Controller Upgrade Design & Procurement	4/1/16	2/12/18	0	$1,315,636
1.7.5.03 Temporary Office Space		11/3/14	8/24/17	0	$872,438
TO1075	Temporary Office Space Lease	11/3/14	8/24/17	0	$793,125
TO1080	Hookup Utilities on Trailer #1	11/20/14	12/12/14	0	$26,438
TO1090	Hookup Utilities on Trailer #2	12/24/14	1/5/15	0	$26,438
TO1100	Hookup Utilities on Trailer #3	1/22/15	2/3/15	0	$26,438
1.7.5.04 Temporary Change Facility		11/3/14	5/18/15	0	$2,700,000
IPL1320	Temporary Change Facility	11/3/14	5/18/15	0	$2,700,000
1.7.5.07 In Town Emergency Operations Center (EOC)		9/16/14 A	6/10/15	2150	$2,300,069
IPL1350	In Town EOC	9/16/14 A	11/11/14	200	$16,295



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
IPL1351	In Town EOC - FY15	11/12/14	6/10/15	1950	$2,283,774
1.7.6 Waste Placement		[illegible]	[illegible]	[illegible]	[illegible]
1.7.6.01 Waste Handling Operations		**9/30/14 A**	**2/24/17**	**26288**	**$4,959,727**
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
WPlacmnt0999	Emplace Derived Waste	4/1/16	4/27/16	1470	$106,652
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
WPlacmnt1060	Waste Placement Support	1/22/16	6/30/16	14705	$1,472,791
WPlacmnt1060a	Emplace Onsite A G Stored Waste	4/28/16	6/30/16	10113	$686,515
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
WHE0900	6 Ton Forklift for RH Underground (Budget Activity)	9/30/14 A	11/12/14	0	$63,450
WHE01000a	Delivery/Acceptance of (2) Push/Pull Devices (Budget Activity)	11/5/15*	11/5/15	0	$190,350
WHE4000a	Delivery/Acceptance of SLBII Handler (Budget Activity)	11/5/15	11/5/15	0	$44,732
WHE2000a	Delivery/Acceptance of (3) 6 Ton Forklifts (Budget Activity)	11/27/15	11/27/15	0	$190,350
WHE3000a	Delivery/Acceptance of CH Transporter (Budget Activity)	11/27/15	11/27/15	0	$1,057,500
WHE950	13 Ton Electric Forklift (Budget Activity)	3/1/16*	3/31/16	0	$211,500
WHE5000a	Delivery/Acceptance of RH Detention Robot (Budget Activity)	10/26/16	10/26/16	0	$105,750
WHE6000a	Delivery/Acceptance of RH Swipe Robot (Budget Activity)	10/26/16	10/26/16	0	$105,750
WHE7000a	Delivery/Acceptance of Swipe Delivery System (Budget Activity)	11/25/16	11/25/16	0	$95,175
WHE8000a	Delivery/Acceptance of (4) ACGLFs (Budget Activity)	11/28/16*	11/28/16	0	$423,000
WHE9000a	Delivery/Acceptance of (2) Trailer Jockeys (Budget Activity)	12/26/16	12/26/16	0	$169,200
WHE10000a	Delivery/Acceptance of Floor Scrubber (Budget Activity)	2/24/17	2/24/17	0	$37,013
1.7.7 Readiness for Operations		[illegible]	[illegible]	[illegible]	[illegible]
1.7.7.01 Line Management Assessment/Readiness Assessment/ORR		**11/26/15**	**3/31/16**	**28800**	**$7,456,009**
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Startup-1110	Management Self-Assessment Internal - Integrated Cold Runs - Budget Activity	11/26/15	12/30/15	10000	$735,881
Startup-1180	Readiness Support	11/26/15	2/3/16	10200	$6,042,541
Startup-1115	Corrective Actions - Budget Activity	12/31/15	1/6/16	200	$19,160
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]



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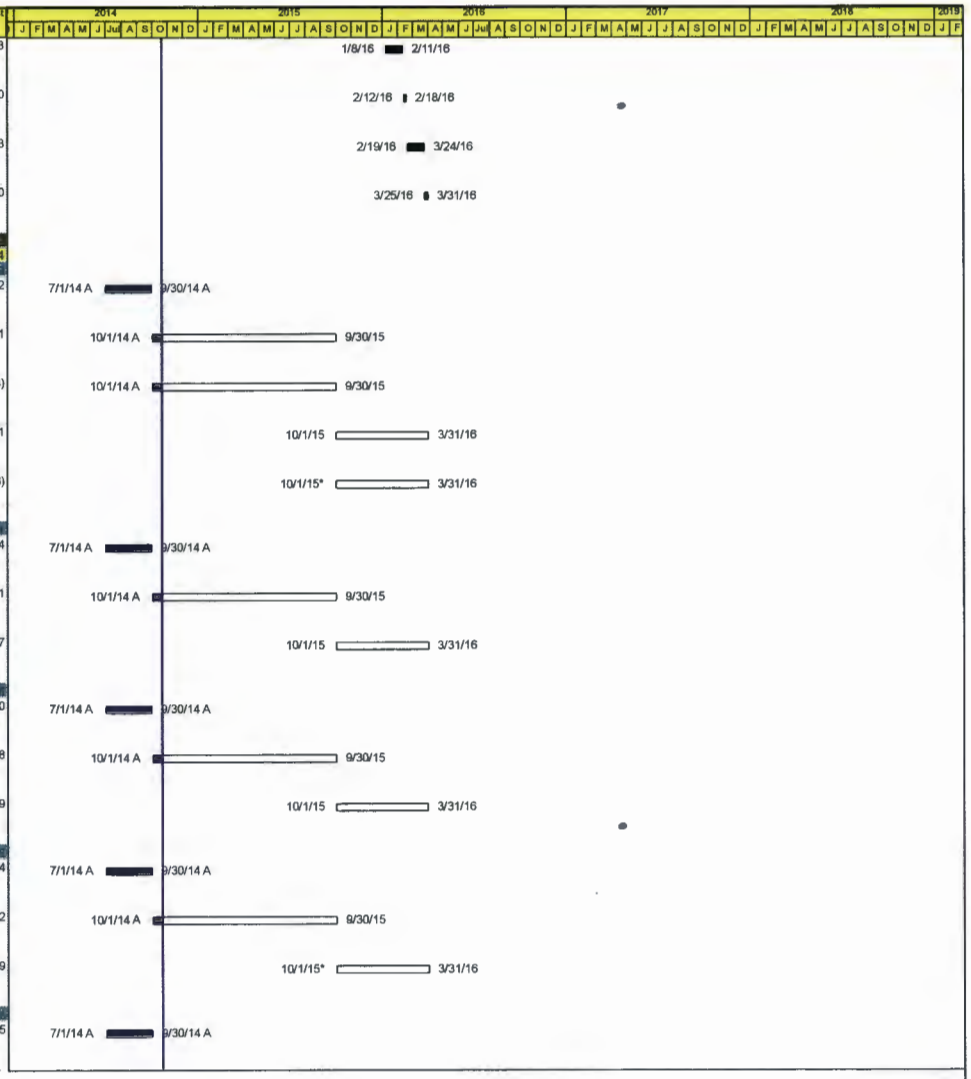
Current Bar Labels ◆ ◆ Actual Milesto...
Remaining Work ◆ ◆ Critical Waste ...
◇ ◇ Milestone Actual Work

Recovery_Resource Loaded Schedule (Does Not Include Escalation)

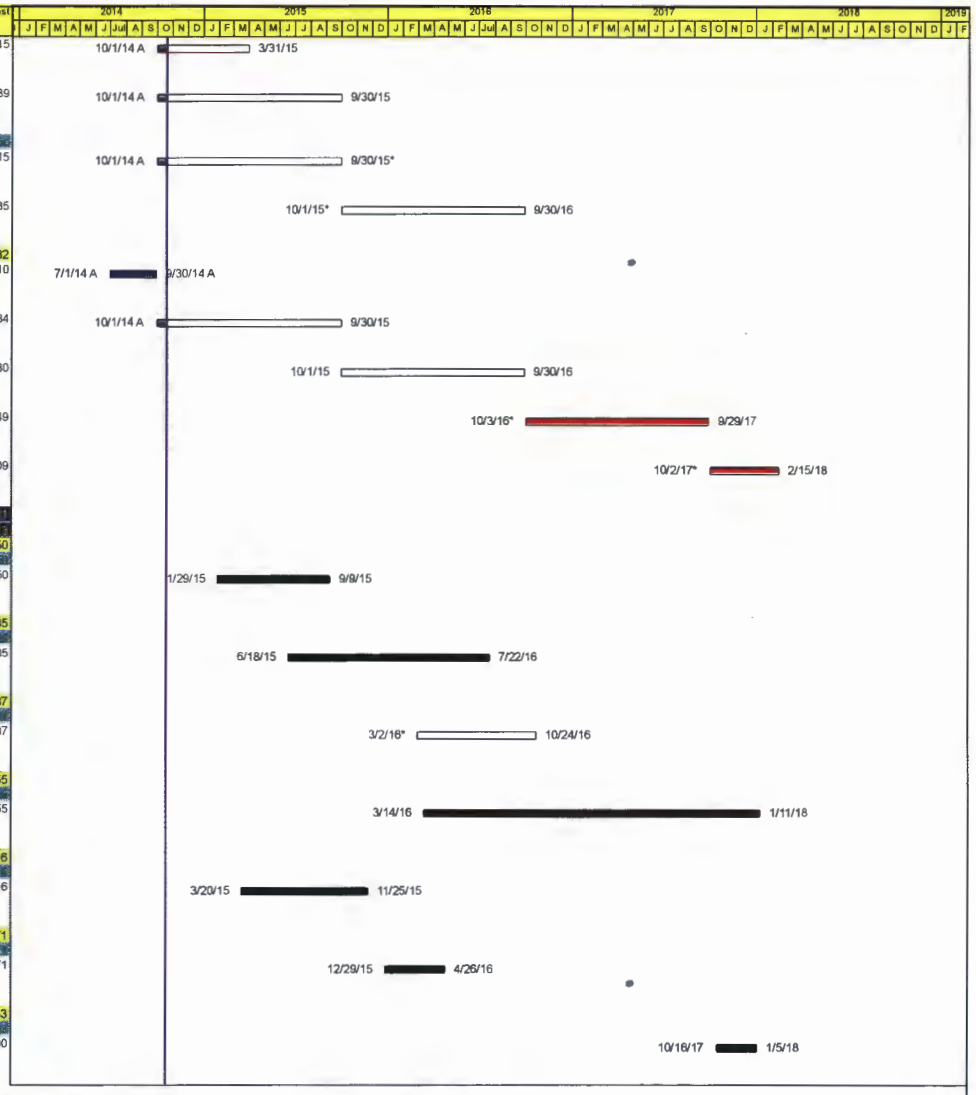
Status as of: 10/21/14

PRINT DATE: 10/26/14

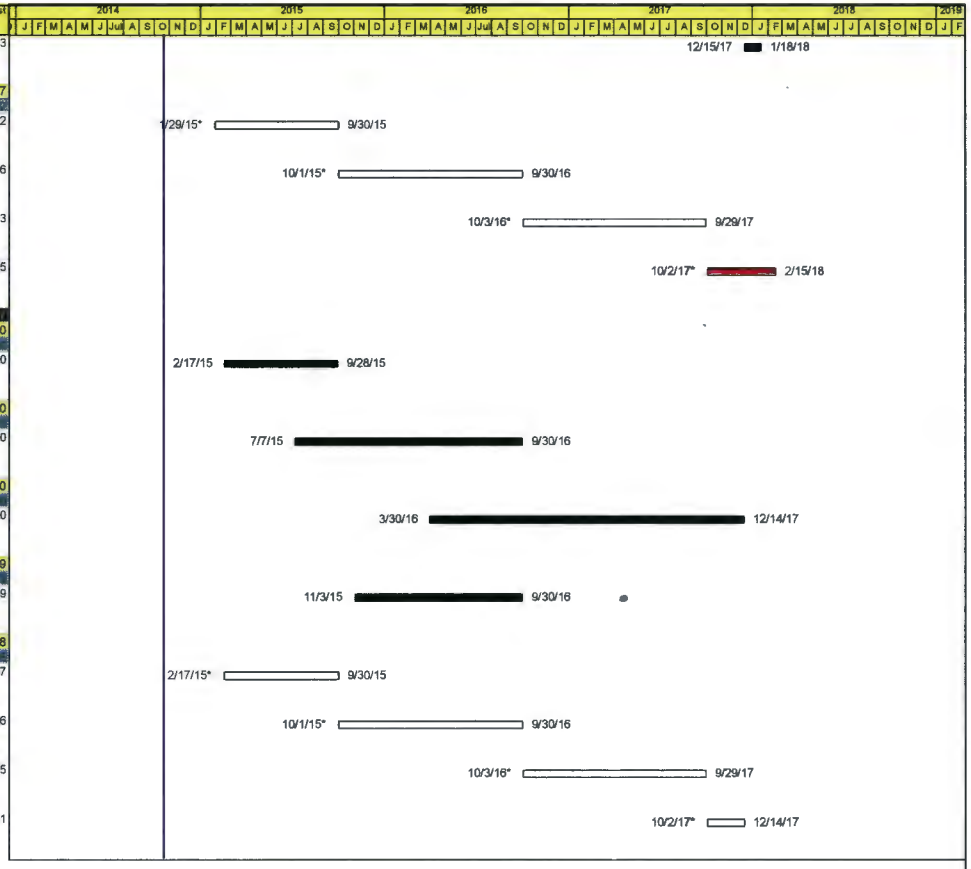
Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
Startup-1140	Perform Contractor Operational Readiness Review (CORR) - Budget Activity	1/8/16	2/11/16	4000	$310,053
Startup-1150	Corrective Actions - Budget Activity	2/12/16	2/18/16	200	$19,160
Startup-1160	Perform DOE Operational Readiness Review (DORR) - Budget Activity	2/19/16	3/24/16	4000	$310,053
Startup-1165	Corrective Actions - Budget Activity	3/25/16	3/31/16	200	$19,160
1.7.8.01 Administrative Programs		**7/1/14 A**	**9/30/16**	**131172**	**$21,527,794**
NWPPM430040	Project Manager FY14	7/1/14 A	9/30/14 A	6336	$3,556,902
NWPPM430045	Project Manager FY15	10/1/14 A	9/30/15	20076	$3,018,361
NWPPM430046	Project Manager FY15 - Reduction	10/1/14 A	9/30/15	-5019	($422,484)
NWPPM430048	Project Manager FY16	10/1/15	3/31/16	8350	$1,521,931
NWPPM430049	Project Manager FY16 - Reduction	10/1/15*	3/31/16	-1675	($140,996)
NWPPM430050	Quality Assurance FY14	7/1/14 A	9/30/14 A	8448	$828,874
NWPPM430055	Quality Assurance FY15	10/1/14 A	9/30/15	27598	$3,299,671
NWPPM430058	Quality Assurance FY16	10/1/15	3/31/16	13736	$1,702,447
NWPPM430100	Regulatory - Permitting Activities FY14	7/1/14 A	9/30/14 A	0	$384,930
NWPPM430110	Regulatory - Permitting Activities FY15	10/1/14 A	9/30/15	0	$407,138
NWPPM430120	Regulatory - Permitting Activities FY16	10/1/15	3/31/16	0	$209,959
NWPPM430070	Project Control FY14	7/1/14 A	9/30/14 A	5940	$495,184
NWPPM430075	Project Control FY15	10/1/14 A	9/30/15	15057	$3,655,462
NWPPM430078	Project Control FY16	10/1/15*	3/31/16	6707	$561,669
NWPPM430080	Operations Project Management FY14	7/1/14 A	9/30/14 A	1584	$126,795



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
NWPPM430090	Operations Project Management FY15	10/1/14 A	3/31/15	3117	$312,215
NWPPM430130	Operations Project Management Support FY15 - Permanent Ventilation System (PVS)	10/1/14 A	9/30/15	8365	$767,089
NWPPM430210	Public Affairs FY15	10/1/14 A	9/30/15*	6264	$620,315
NWPPM430220	Public Affairs FY16	10/1/15*	9/30/16	6288	$622,335
1.7.8.FM FM-Overhead		**7/1/14 A**	**2/15/18**	**0**	**$5,097,382**
NWPPM430095	Funds Management- FY14 Overhead	7/1/14 A	9/30/14 A	0	$743,710
NWPPM430096	Funds Management- FY15 Overhead	10/1/14 A	9/30/15	0	$2,753,784
NWPPM430097	Funds Management- FY16 Overhead	10/1/15	9/30/16	0	$1,277,430
NWPPM430098	Funds Management- FY17 Overhead	10/3/16*	9/29/17	0	$312,349
NWPPM430099	Funds Management - FY18 Overhead	10/2/17*	2/15/18	0	$10,109
1.8 Permanent Ventilation System					
1.8.1 Ventilation Equipment Project					
1.8.1.01 Ventilation Equipment Requirements and Design Criteria		**1/29/15**	**9/9/15**	**0**	**$18,083,250**
PVS1500a1	Requirements and Design Criteria (Summary Budget Activity)	1/29/15	9/9/15	0	$18,083,250
1.8.1.02 Ventilation Equipment Design		**6/18/15**	**7/22/16**	**0**	**$5,539,185**
PVS3001a1	Design (Summary Activity for Budget)	6/18/15	7/22/16	0	$5,539,185
1.8.1.03 Ventilation Equipment Procurement and Fabrication		**3/2/16**	**10/24/16**	**0**	**$12,527,187**
PVS4040a	Procurement and Fabrication (Summary Budget Activity)	3/2/16*	10/24/16	0	$12,527,187
1.8.1.04 Ventilation Equipment Installation and Construction		**3/14/16**	**1/11/18**	**0**	**$48,849,055**
PVS4050a	Installation and Construction (Summary Budget Activity)	3/14/16	1/11/18	0	$48,849,055
1.8.1.05 Ventilation Equipment Regulatory Documents		**3/20/15**	**11/25/15**	**0**	**$931,516**
W10625	PCN, PMR, and Notice of Planned Change for Permanent Ventilation - Budget Activity	3/20/15	11/25/15	0	$931,516
1.8.1.06 Ventilation Equipment DSA		**12/29/15**	**4/26/16**	**1412**	**$3,311,171**
DSA1030	DSA Addendum for PVS	12/29/15	4/26/16	1412	$3,311,171
1.8.1.07 Ventilation Equipment Readiness for Operations		**10/16/17**	**1/18/18**	**0**	**$5,595,233**
PVS5000	CD-4 Approve Start of Operations (Budget Activity)	10/16/17	1/5/18	0	$1,226,700



Activity ID	Activity Name	Start	Finish	Budgeted Labor Units	Budgeted Total Cost
FStartup-1110	Perform Line Management Assessment (LMA) (Budget Activity)	12/15/17	1/18/18	0	$4,368,533
1.8.1.08 Ventilation Equipment Program Management Support		**1/29/15**	**2/15/18**	**0**	**$3,041,717**
PVS5012.15	Overhead for FY15	1/29/15*	9/30/15	0	$580,132
PVS5012.16	Overhead for FY16	10/1/15*	9/30/16	0	$1,003,216
PVS5012.17	Overhead for FY17	10/3/16*	9/29/17	0	$946,073
PVS5012.18	Overhead for FY18	10/2/17*	2/15/18	0	$512,295
1.8.2 Shaft and Drifts Project		**2/17/15**	**12/14/17**	**0**	**$21,000,000**
1.8.2.01 Shaft and Drifts Requirements and Design Criteria		**2/17/15**	**9/28/15**	**0**	**$1,607,400**
PVS1500a	Requirements and Design Criteria (Summary Budget Activity)	2/17/15	9/28/15	0	$1,607,400
1.8.2.02 Shaft and Drifts Design		**7/7/15**	**9/30/16**	**0**	**$1,522,800**
PVS3001a	Shaft & Drift Design (Summary Budget Activity)	7/7/15	9/30/16	0	$1,522,800
1.8.2.04 Shaft and Drifts Installation and Construction		**3/30/16**	**12/14/17**	**0**	**$13,430,250**
PVS4060a	Installation and Construction (Summary Budget Activity)	3/30/16	12/14/17	0	$13,430,250
1.8.2.06 Shaft and Drifts Regulatory Documents		**11/3/15**	**9/30/16**	**0**	**$649,379**
CL2__1510	PMR for Permanent Ventilation	11/3/15	9/30/16	0	$649,379
1.8.2.08 Shaft and Drifts Program Management Support		**2/17/15**	**12/14/17**	**0**	**$558,978**
PVS5013.15	Overhead for FY15	2/17/15*	9/30/15	0	$54,387
PVS5013.16	Overhead for FY16	10/1/15*	9/30/16	0	$174,636
PVS5013.17	Overhead for FY17	10/3/16*	9/29/17	0	$266,775
PVS5013.18	Overhead for FY18	10/2/17*	12/14/17	0	$63,181



WIPP Recovery Workshop

U.S. Department of Energy

Waste Isolation Pilot Plant

January 14, 2015

Agenda

- Introduction and Workshop Objective
- WIPP Recovery Approach
- Interim Performance Measurement Baseline
- WIPP Recovery Project Summary Level Schedule
- Questions and Answers

Introductions and Workshop Objective

- Introductions
- The objective of this workshop is to provide a forum for a detailed discussion of the WIPP Recovery Project and to address stakeholder questions and comments
- The review will include:
  - Development of the Recovery Project Interim Baseline
  - The scope and schedule of the recovery effort
  - The cost to complete the recovery effort
  - The risks and challenges associated with the recovery effort
  - How progress is being monitored and measured

WIPP Recovery

- The Recovery effort has been divided into two phases:

- **Phase I – Mitigation**
  (stabilize the plant)

- **Phase II – Recovery**
  - Complete the programmatic and operational activities necessary to resume waste emplacement operations by the first quarter of 2016 in alignment with the DOE Recovery Plan
  - Complete and make operational a new ventilation system that will support pre-event waste emplacement rates and mining operations

Phase I – Mitigation

- Performance of Radiological Surveys throughout the WIPP site
- Installation of a Continuous Air Monitor at Station B for real time monitoring
- Sealing of the Bypass Dampers
- Collection and Analysis of Environmental Samples
- Entering the RCRA Contingency Plan
- Emergency Management Event Declaration Conservatism
- Completion of the event bioassay program
- Development of Nuclear Safety Documentation to support
- recovery activities
  - U/G Ventilation System Operation
  - Entries
  - Processing of existing surface CH waste
  - Venting of Type B packages
- Cleaning of the Waste Hoist Tower and Waste Hoist Components
- Replacement of U/G Ventilation System Filters

Phase II – Recovery and Resumption of Operations

- ESS Documents to support recovery activities and DSA Revision
- Underground restoration
- Panel 6 Initial Closure and Panel 7, Room 7 Closure
- Interim Ventilation Modifications
- Supplemental Ventilation Modifications
- Safety Management Program (SMP) Revitalization
- New Ventilation System
- Readiness Activities

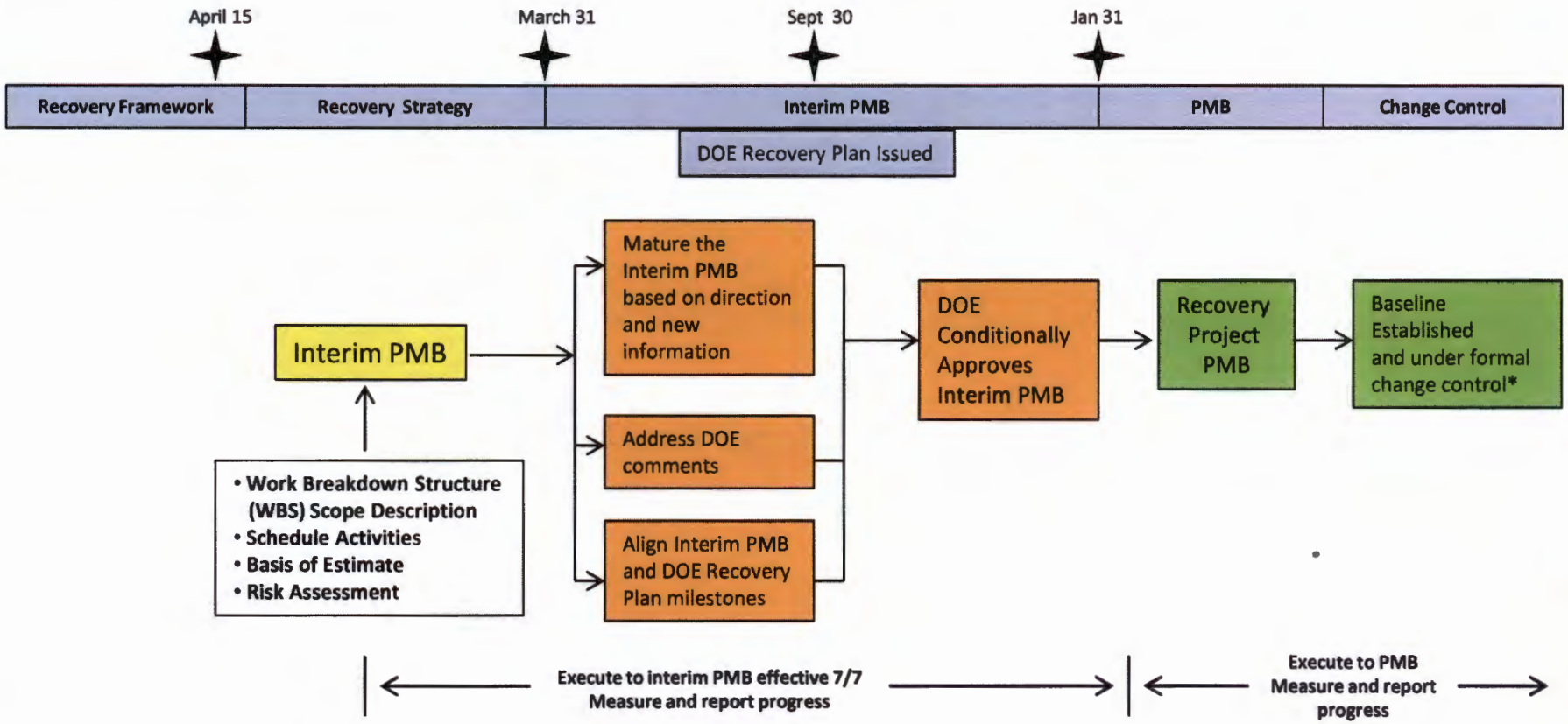
Interim Performance Measurement Baseline (PMB)

What is the interim PMB?

- WIPP is an Management and Operations (M&O) contract. Under an M&O contract, work activities are managed as a level of effort
- Although the WIPP site is not processing TRU waste at this time, there continue to be operational and business activities that must be performed under the M&O contract
- The WIPP Recovery effort is being managed separately, as a project with discrete resource loaded schedule activities and a detailed cost estimate reflective of the schedule activities .
- The interim PMB presents the scope, cost and schedule activities that comprise the WIPP recovery and commencement of waste emplacement operations, including both operating and capital asset project scopes of work
- The interim PMB was established in July and has been refined as new information has been learned regarding the recovery effort, without the need for a formal change control process. The interim PMB is the basis for the final PMB, which is considered the baseline for the recovery effort
- Changes to the scope, schedule and estimate are being managed through a formal Change Control Process
- Execution of the PMB as presented is contingent on adequate funding in out years, and no major changes to assumptions for current year funding

Interim Performance Measurement Baseline (PMB)

How was the Interim PMB developed?



* Execution of the PMB is contingent on adequate funding in outyears, and no major changes to assumptions for current year funding.

Work Breakdown Structure

1.0 TRU Waste

1.7 WIPP Recovery Project

1.7.1 Facility Program Enhancements

1.7.1.01 Nuclear Safety Program
1.7.1.02 Emergency Management Program
1.7.1.03 Radioactive and Hazardous Waste Management Program
1.7.1.04 Human Factors Program
1.7.1.05 Testing/Surveillance/Maintenance Program
1.7.1.06 Conduct of Operations Program
1.7.1.07 Fire Protection Program
1.7.1.08 Procedures and Training Program
1.7.1.09 Quality Assurance Program
1.7.1.10 Radiation Protection Program
1.7.1.11 Industrial Safety Program
1.7.1.12 Engineering Program
1.7.1.13 Contractor Assurance Program
1.7.1.14 Hazardous Material Protection Program
1.7.1.15 Decontamination and Decommissioning Program
1.7.1.16 Criticality Safety Program
1.7.1.17 Integrated Safety Management System Program
1.7.1.18 Work Control Program

1.7.2 Placeholder

1.7.2.01 Placeholder

1.7.3 Documented Safety Analysis

1.7.3.01 Placeholder
1.7.3.02 Evaluation of the Safety of the Situation (ESS) Revisions
1.7.3.03 Documented Safety Analysis (DSA) Revision

1.7.4 Underground Habitability/Operations

1.7.4.01 Decontamination and Remediation (D&R)
1.7.4.02 Underground Stabilization
1.7.4.03 Interim Ventilation System
1.7.4.04 Supplemental Ventilation
1.7.4.05 Underground Equipment/Systems
1.7.4.06 Panel /Room Closures

1.7.5 Facility Upgrades

1.7.5.01 Salt Hoist Controller Upgrade
1.7.5.02 Waste Hoist Controller Upgrade
1.7.5.03 Temporary Office Space
1.7.5.04 Temporary Change Facility
1.7.5.05 Placeholder
1.7.5.06 Placeholder
1.7.5.07 In Town Emergency Operations Center (EOC)

1.7.6 Waste Placement

1.7.6.01 Waste Handling Operations

1.7.7 Readiness for Operations

1.7.7.01 Line Management Assessment/Readiness Assessment/ORR

1.7.8 Program Management Support

1.7.8.01 Administrative Programs

1.0 TRU Waste

1.8 Permanent Ventilation System

1.8.1 Ventilation Equipment Project

1.8.1.01 Ventilation Equipment Requirements and Design Criteria
1.8.1.02 Ventilation Equipment Design
1.8.1.03 Ventilation Equipment Procurement and Fabrication
1.8.1.04 Ventilation Equipment Installation and Construction
1.8.1.05 Ventilation Equipment Regulatory Documents
1.8.1.06 Ventilation Equipment Documented Safety Analysis (DSA)
1.8.1.07 Ventilation Equipment Readiness for Operations
1.8.1.08 Ventilation Equipment Program Management Support

1.8.2 Shaft and Drifts Project

1.8.2.01 Shaft and Drifts Requirements and Design Criteria
1.8.2.02 Shaft and Drifts Design
1.8.2.03 Placeholder
1.8.2.04 Shaft and Drifts Installation and Construction
1.8.2.05 Shaft and Drifts Regulatory Documents
1.8.2.06 Placeholder
1.8.2.07 Placeholder
1.8.2.08 Shaft and Drifts Program Management Support

Basis of Estimate (BOE)

- Critical element in the project management process.
- Realistic costs of an item or activity and the availability of resources and funding are key considerations in building an executable baseline.
- CBFO reviews the BOE as part of the PMB approval process, assessing the reasonableness and completeness of the contractor estimates.
- The BOE provides the foundation of the recovery portion of the CBFO budget request(s).
- The BOE includes a scope description, cost uncertainty range, the method used to measure performance, methodology to develop the estimate, existing data to support the estimate, estimating assumptions, etc.
- Different estimation methods are used, e.g., historical costs, expert opinion, subcontractor quotes, management judgment, and activity-based detailed estimates.

Interim PMB – Risk Approach

How were risks identified?

Technical and Programmatic Risk

- Risks were identified for all areas of recovery scope during the Framework development and refined during the Interim PMB development. Likelihood and consequence thresholds were established for the Interim PMB and used to grade risks. Risk handling strategies were developed for risks and the post handling impact data used to derive a Management Reserve and contingency using a Monte Carlo analysis.

Estimate Uncertainty

- Estimate uncertainty was derived from estimate ranges (BOE sheets). The low, base and high range values were modeled using the Monte Carlo techniques to derive Management Reserve (MR) and DOE contingency.

- The MR and DOE contingency for the permanent ventilation projects (Capital projects) were estimated based on the upper most bounded range of the rough order of magnitude (ROM) estimates due to the uncertainty in the scope definition. The estimate will be refined as the scope is more clearly defined.

Schedule Uncertainty

- The schedule uncertainty was derived by Pertmaster schedule analysis for the recovery scope.
- Risk based, estimate and schedule uncertainties are used to derive Total MR and DOE contingency.

Interim PMB Risk Matrix

ID	Event	DOE or Contr	WBS	Likelihood	Basis	Unmitigated Consequence	Basis	Unmitigated Risk Level (Grading)	R-S	Handling Strategy	Mitigated Consequence	Likelihood	Basis	Cost BC $K	Cost MLC $K	Cost WC $K	Sched BC	Sched MLC	Sched WC	Residual Risk Level (Grading)
RC-0	EPA requires DOE to submit a PCR for changes resulting from the supplemental ventilation system	DOE	1.7.4.04	Unlikely	Although a regulatory analysis assumes that a PCR is not required, EPA may require DOE to submit a PCR	Severe (Critical)	EPA determines that changes pertaining to the supplemental ventilation system differ significantly from the most recent compliance certification baseline. Public interest and Congressional pressure may drive EPA to require DOE to submit a PCR	MODERATE	Mitigate	Conduct discussions and organize meeting(s) with EPA ORIA and Region 6 to discuss separation of the construction and disposal circuit planned for the supplemental ventilation system	Severe (Critical)	Unlikely	Continued dialogue will be the key factor in mitigation of this risk.	100	1,000	2,000	20 Months	22 Months	24 Months	MODERATE
30	Construction delays due to material availability, supplier contract problems, design construction issues (e.g. asbuilt/field conditions), prerequisites for construction not performed on schedule, regulatory issues.	CONTR	1.7.4.03	Very Likely	Based on previous experience	Significant	The worst case assumes design issues, regulatory activities or prerequisites are not well defined or met. This could delay activities up to 6 months.	HIGH	Mitigate	Identify difficult and long lead procurements and start early, ensure a valid and updated qualified supplier list is maintained, consider independent validation of constructability in field, ensure progress of prerequisite activities are monitored and alternate plans (when available) used. Have regulatory issues defined and mitigated early in the project. Ensure prerequisites are performed early to	Marginal	Likely	Excessive weather delays or labor issues remain.	10	20	30	1 Wk	2 Wks	3 Wks	MODERATE
1	Qualified Work Planners are required to support work planning demands. A risk exists that qualified work planners not available when required to support work planning demands.	CONTR	1.7.1.01	Likely	Multiple Recovery Project operations activities will be competing for resources.	Significant	Schedule impact of 9 months; cost impact of $500k to obtain subcontractor resouces at a premium.	MODERATE	Mitigate	Two new NWP work planners reported June 16, 2014 to begin training. Additional NWP work planner to be hired. Four contract work planners to be hired with radiological work planning experience. Demand to be assessed as new work is identified to determine need for additional funding/headcount to sustain at an acceptable level. Early procurement before the end of the FY to avoid issues at the end of FY.	Marginal	Unlikely	Planners are continuing to rotate out	50	125	250	1 Mth	2 Mths	4 mths	LOW
4	Mentoring of work crews is required to enhance disciplined operations required for nuclear safety. If mentors are not available when required there would be a slow down in the execution of conduct of maintenance corrective actions	CONTR	1.7.1.01	Unlikely	Corporate reachback is being exercised	Negligible	In the worst case, mentors are not available when required which would slow down the execution of conduct of maintenance corrective actions up to 2 months.	LOW	Mitigate	Identify, by name, assigned mentors to support Conduct of Maintenance actions by 06/16/14	Negligible	Very Unlikely	Likelihood has been reduced by assigning specific mentors.	0	0	0	2 Wks	1 Mth	2 Mths	LOW
6	Work load identified for Work Planners exceeds budgeted headcount	CONTR	1.7.1.01	Likely	The corrective maintenance required has not been fully developed and could easilly be greater than anticipated, requiring an increased demand in the need for work planning resources.	Marginal	In the worst case, increased workload without comensurate increase in resources could impact completion of maintenance activities up to 3 months and result in increased costs of up to $1M for additional resources.	MODERATE	Mitigate	Identify additional work planning resources (subcontractor, reach back) and advance procurement process as far as practical. Monitor corrective action required as it is being developed and obtain additional contract work planning support immediately the addional need for resources is projected.	Marginal	Unlikely	Likelihood has been reduced by identifying additional resources and readying for immediate deployment	500	500	1,000	2 Wks	1 Mth	2 Mths	LOW
6	Only "Key Risks" are identified during this initial assessment. A risk exists that when the underpinning assessmnet is performed on this activity, additional risks are identified.	CONTR	1.7 & 1.8	Likely	When activity team is assembled to finalize risk identification, the scope of the activity will have been definitiaed and it is likely additional risk may be identified.	Negligible	All "Key Risks" are understood and and have been already identified, it is likely that less significant risks may emerge during formal assessment, however their impact will be limited.	LOW	Mitigate	These risks will generally be low and comprehensive identification will result in successful handling and management. To ensure their residual impact is included in the derived MR and contingency, the mitigated consequences have been estimated as a placeholder for these risks. During the early stages of execution, formal risk management will identify and manage these risks.	Negligible	Likely	Likelihood remains the same	1,000	1,000	1,000	2 Mths	2 Mths	2 Mths	LOW

Sample page

WIPP Cost Summary—WIPP Recovery Plan

Table 2. Cost Summary Profile

WBS		FY2014	FY2015	Outyears	Total
1.7	Event Recovery Project				
1.7.1	Facility Program Enhancements	$8,174	$38,733	$10,718	$57,625
1.7.3	Documented Safety Analysis	$2,374	$3,015	$0	$5,389
1.7.4	Mine Habitability/Operations	$12,230	$57,852	$25,985	$96,066
1.7.5	Facility Upgrades	$825	$6,454	$3,960	$11,239
1.7.6	Waste Placement	$0	$86	$7,092	$7,178
1.7.7	Readiness for Operations	$0	$0	$9,983	$9,983
1.7.8	Program Management Support	$4,603	$30,216	$19,684	$54,504
1.7	Recovery Project Total	$28,206	$136,356	$77,421	$241,983

Note: Costs in $thousands.

*Restoration of WIPP to full operations will require additional capital asset project(s). A permanent ventilation system with a cost range of $77 - $309 million, pending completion of an alternatives analysis. These cost estimates are preliminary and will be refined as the alternative(s) are determined and detailed planning is developed and as uncertainties are reduced.

Interim PMB – Monitoring of Progress

How is the WIPP Recovery Project implemented and tracked?

Plan of the Day (POD) meetings (Monday – Friday)

- Review of the current two week window of schedule activities
- The Champions status schedule activities to be performed in that window that are scheduled to start or scheduled to complete
- Issues that would prevent activities from starting or completing as scheduled are discussed and a path forward is developed to minimize impact

Plan of the Week meetings (Wednesday)

- A review of the activities that are on critical path (have no schedule float or is impacting the start of waste emplacement milestone)
- Actions are taken to mitigate the critical path activities

Monthly Project Status Meetings with CBFO

- Cost and schedule performance are reviewed against the baseline

Monthly Change Control Board Meeting

- Changes to the baseline (schedule or cost) that impact schedule milestones or cost impacts greater than $250,000 are reviewed.

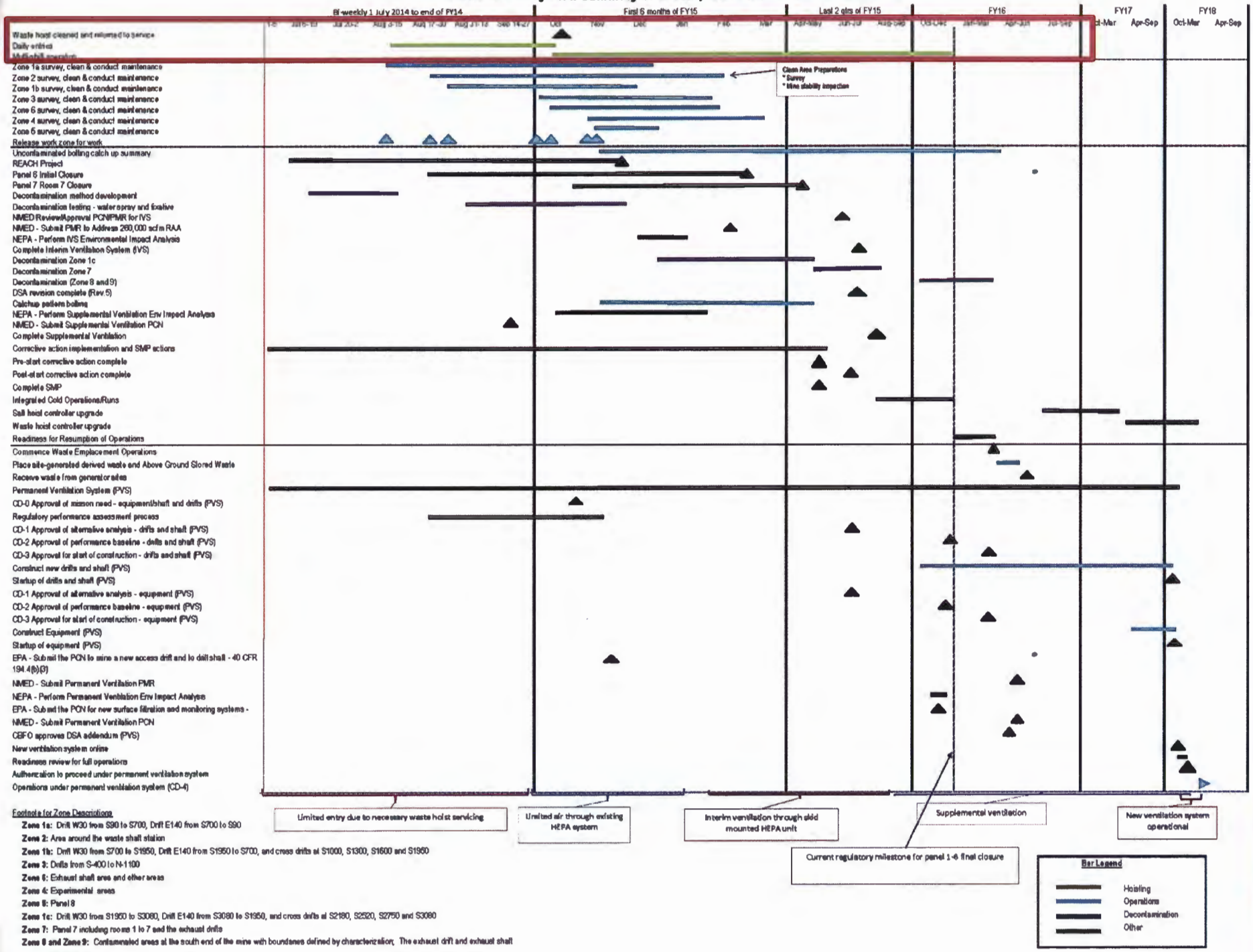
Key Milestones Page 1

Milestone	Description	Date
Completion of moderate and high efficiency filter change out	Current filtered ventilation system returned to full operation	3rd Qtr FY14 Completed
Start of underground entries	Planned execution of entry to the underground	4th Qtr FY14 Completed
Release of zone 1a RBA (radiological buffer zone) for work	Completion of radiological survey and clear demarcation of RBA	4th Qtr FY14 Completed
NMED - Submit Interim Ventilation Regulatory Review	Development and submittal of planned changes to the permitted facility and appurtenances	4th Qtr FY14 Completed
Start of bolt catchup	Resumption of bolting activities in first cleared RBA/clean area	1st Qtr FY15
Restart of the waste hoist	Waste hoist returned to service following cleaning from soot damage and completion of all preventative maintenance	1st Qtr FY15
Approval of Critical Decision (CD) 0	CD-0 Approval of mission need for the permanent ventilation system (PVS) capital line-item project	1st Qtr FY15
NMED - Submit PMR to Address 260,000 scfm RAA	Development and submittal of a Permit Modification Request (PMR) to address the change from 260,000 scfm annual running average (RAA) of U/G ventilation	2nd Qtr FY15
Completion of Panel 6 Initial Closure	Expedited initial closure of Panel 6, including development of closure approach, design, and installation.	2nd Qtr FY15
NEPA - Perform Supplemental Ventilation Env Impact Analysis	Analysis of environmental impacts to human health and the environment. Regulatory analysis. Approved by CBFO NEPA Compliance Officer	2nd Qtr FY15
NEPA - Perform Interim Ventilation Env Impact Analysis	Analysis of environmental impacts to human health and the environment. Regulatory analysis. Approved by CBFO NEPA Compliance Officer	2nd Qtr FY15
Start of decontamination area 1c	Initiate decontamination of area 1c (removal of equipment)	2nd Qtr FY15
Completion of all uncontaminated Zone survey, cleaning, and maintenance	Completion of areas 1a, 1b, 2, 3, 4, 5, and 6	2nd Qtr FY15
NMED - Submit Supplemental Ventilation PCN	Development and submittal of planned changes to the permitted facility and appurtenances	2nd Qtr FY15
Completion of corrective actions and SMP activities	Completion of pre-start and post-start corrective actions and SMP activities	3rd Qtr FY15
Approval of Critical Decision (CD) 1*	CD-1 Approval of alternative selection and cost range for the PVS shaft/drifts	3rd Qtr FY15
Approval of Critical Decision (CD) 1*	CD-1 Approval of alternative selection and cost range for the PVS equipment	3rd Qtr FY15
Completion of Interim Ventilation System	Completion of installation, startup, and testing of supplemental skid-mounted HEPA units to provide incremental airflow in the underground	4th Qtr FY15
Completion of DSA Revision 5	Completion of a DSA revision that reflects current underground conditions and eliminates compensatory measures prior to waste emplacement Operations and includes DOE/CBFO review and implementation	4th Qtr FY15
Completion of Supplemental Ventilation	Provide additional air flow on the clean side of the underground enabling operations on a reduced scale	4th Qtr FY15
Completion of decontamination activities to affix radioactive contaminates in panel 7	Release of panel 7	4th Qtr FY15

Key Milestones Page 2

Milestone	Description	Date
EPA - Submit the PCN to excavate a new access drift and to drill shaft	40 CFR 194.4(b)(3); 40 CFR Part 191, Subpart A.	1st Qtr FY16
NEPA - Perform Permanent Ventilation Env Impact Analysis	Analysis of environmental impacts to human health and the environment. Regulatory analysis. Approved by CBFO NEPA Compliance Officer	1st Qtr FY16
EPA - Submit the Regulatory review for new surface filtration and monitoring systems	40 CFR 194.4(b)(3) and 40 CFR Part 191, Subpart A.	1st Qtr FY16
NMED - Submit Permanent Ventilation PCN	Development and submittal of planned changes to the permitted facility and appurtenances	1st Qtr FY16
Approval of Critical Decision (CD) 2*	CD-2 Approval of performance baseline for the PVS shaft/drifts	1st Qtr FY16
Approval of Critical Decision (CD) 2*	CD-2 Approval of performance baseline – PVS equipment	1st Qtr FY16
Approval of Critical Decision (CD) 3*	CD-3 Approval for start of construction for the PVS shaft/drifts	2nd Qtr FY16
Approval of Critical Decision (CD) 3*	CD-3 Approval for start of construction – PVS equipment	2nd Qtr FY16
Authorization to proceed – Commence Waste Emplacement Operations	Completion of readiness process for Commence Waste Emplacement Operations addendum	2nd Qtr FY16
Completion of Contaminated Zones	Completion of decontamination of Zones 8 and 9	2nd Qtr FY16
Completion of DSA Addendum	Completion of a DSA addendum prior to Permanent Ventilation	3rd Qtr FY16
Capability to emplace site derived waste	NWP will be capable of emplacing the first package of site derived waste	3rd Qtr FY16
Capability to emplace above ground stored TRU waste	NWP will be capable of emplacing the first package of stored TRU waste in panel 7	3rd Qtr FY16
NMED - Submit Permanent Ventilation PMR	Development and submittal of a PMR to address the new exhaust shaft	3rd Qtr FY16
Capable of receiving offsite TRU waste from generator site	Receipt of TRU waste from generator site for emplacement in panel 7	3rd Qtr FY16
Completion of Salt Hoist Controller Upgrade	Phased upgrade to the Salt Hoist Controls to minimize system outage	2nd Qtr FY17
Approval of Critical Decision (CD) 4*	Completion of the Readiness process for utilizing the permanent ventilation system	1st Qtr FY18
Completion of Waste Hoist Controller Upgrade	Phased upgrade to the Waste Hoist Controls to minimize system outage	2nd Qtr FY18
Startup of the PVS system - Authorization to Proceed – PVS	Completion of installation, startup, and testing activities for the PVS	2nd Qtr FY18

WIPP Recovery Plan Summary Schedule, Rev. 3 Schedule



Footnote for Zone Descriptions

Zone 1a: Drift W30 from S90 to S700, Drift E140 from S700 to S90
Zone 2: Area around the waste shaft station
Zone 1b: Drift W30 from S700 to S1950, Drift E140 from S1950 to S700, and cross drifts at S1000, S1300, S1600 and S1950
Zone 3: Drifts from S-400 to N-1100
Zone 6: Exhaust shaft area and other areas
Zone 4: Experimental areas
Zone 8: Panel 8
Zone 1c: Drift W30 from S1950 to S3080, Drift E140 from S3080 to S1950, and cross drifts at S2180, S2520, S2750 and S3080
Zone 7: Panel 7 including rooms 1 to 7 and the exhaust drifts
Zone 8 and Zone 9: Contaminated areas at the south end of the mine with boundaries defined by characterization, The exhaust drift and exhaust shaft

Footnote for Permanent ventilation system

Detail activities are located in the "Permanent Vent Sys" Project

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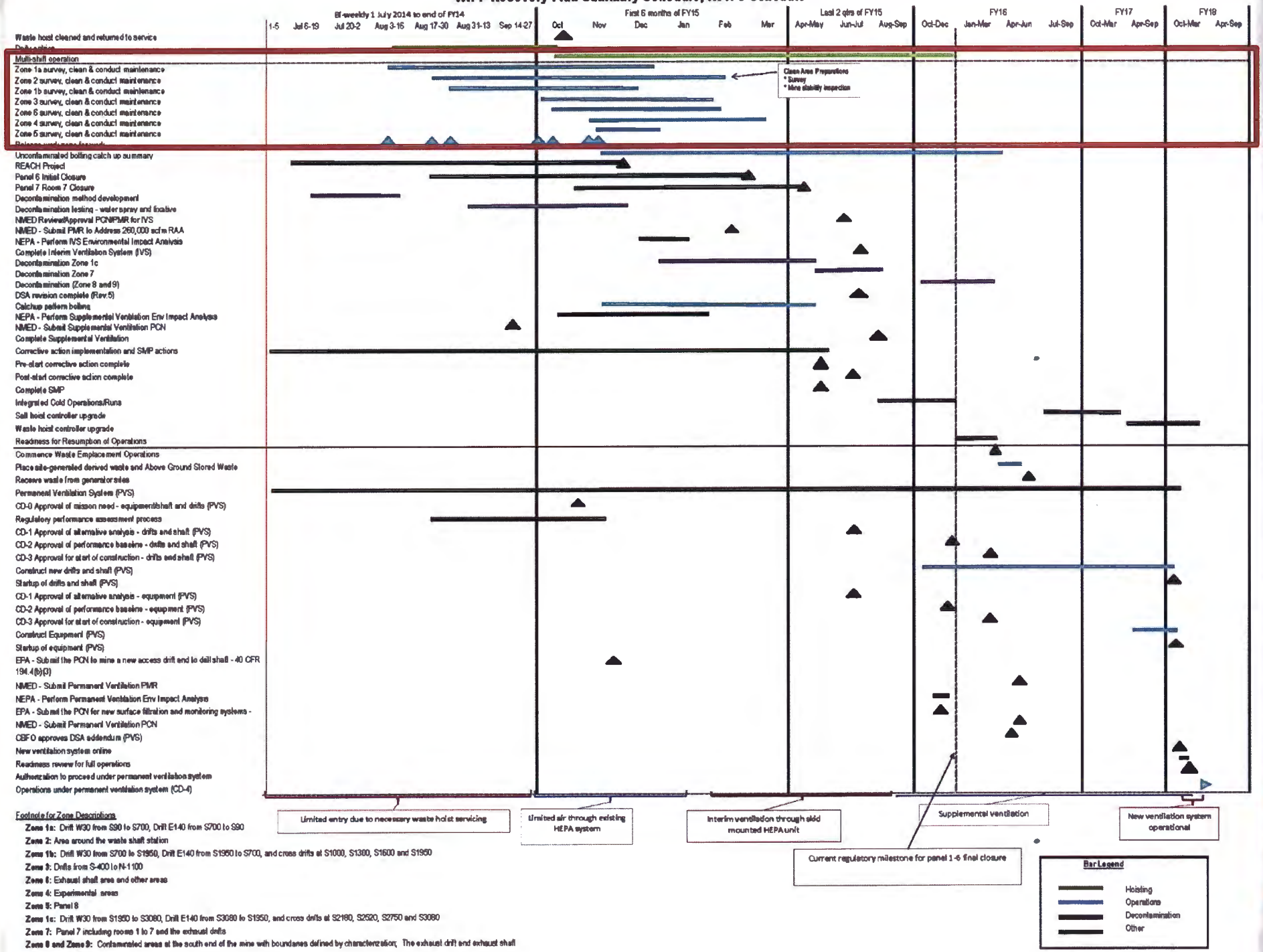
Underground Entries

- Initial entries limited to 24 persons due to waste hoist not in service
  - 4 entries/week
  - Daily entries
  - Two entries daily
  - Multi-shift operation
- Increased up to 75 persons on 11/15 when waste hoist available for emergency egress
- Waste hoist expected to be back in full service in the next month

WIPP Recovery Plan Summary Schedule, Rev. 3 Schedule



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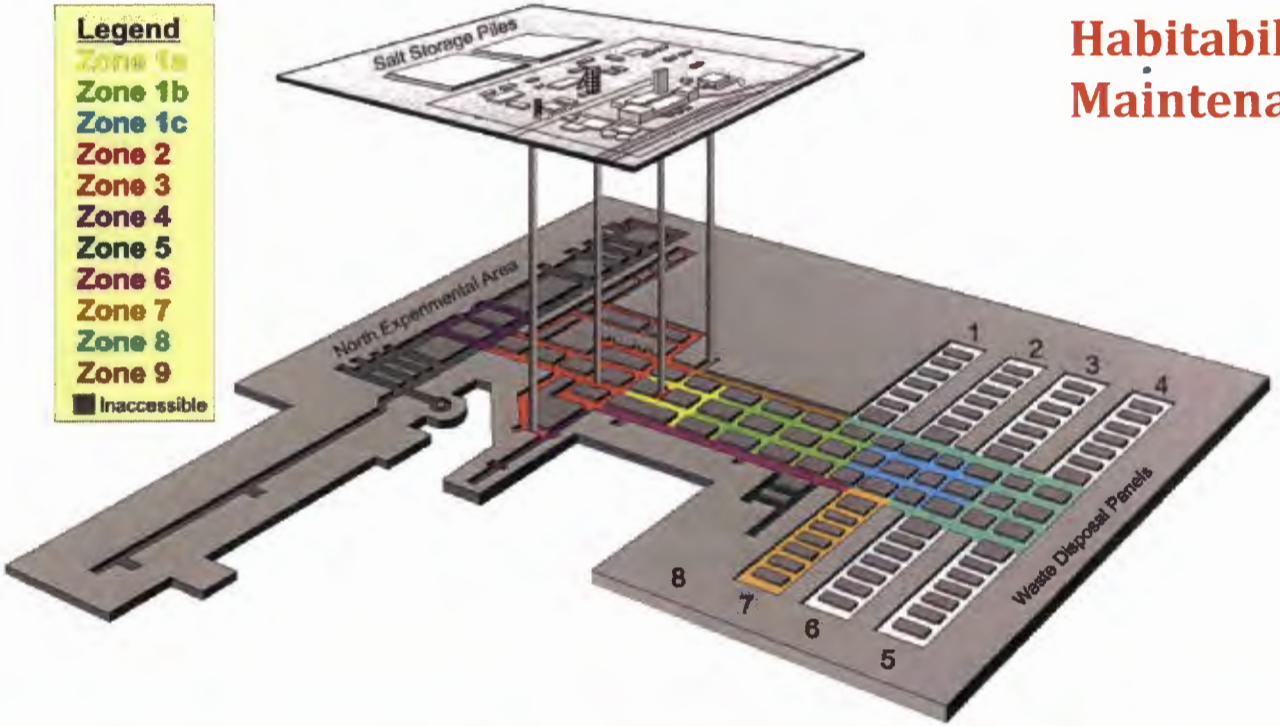
Key Activities (FY14 – mid FY15)

- Zone Cleaning and Habitability
  - Radiological surveys and rollback
  - 60% of u/g rolled back to Controlled Area
  - Mine stability inspections
    - Uncontaminated bolting in progress since 11/15.
    - E-140 drift bolting complete
  - Smoke remediation/cleaning
    - 60% complete
  - Maintenance on required equipment
    - Contaminated bolting equipment restoration in progress
- Challenges
  - Existing ventilation system in filtration mode
  - Limitation on equipment operation due to flow-rate restrictions (60K cfm)
    - 2 pieces of diesel fuel equipment operation

Zone Cleanup, Habitability and Maintenance



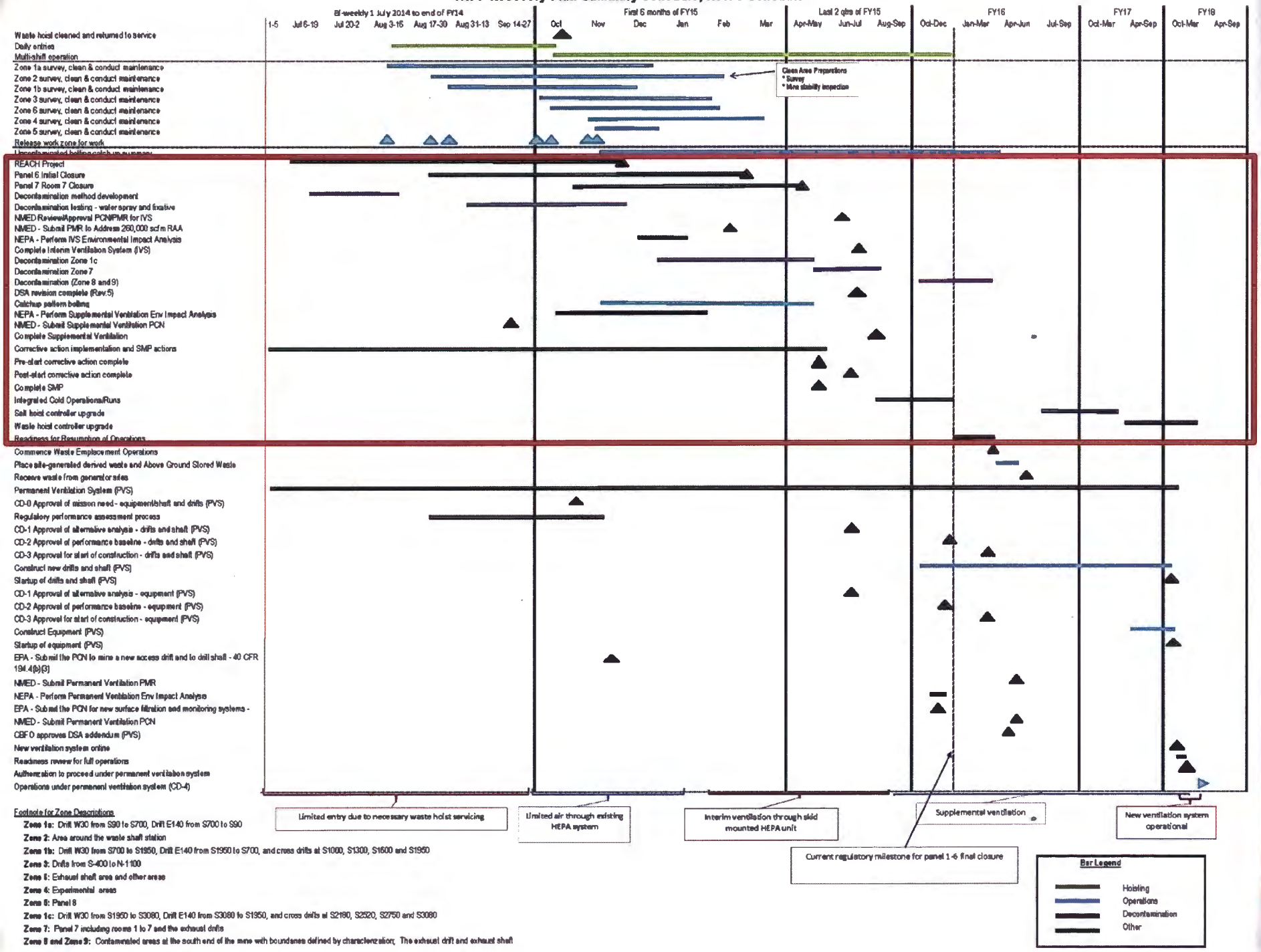
Zone	Description	Radiological Contamination
Zone 1a	Drift W30 from S90 to S700, Drift E140 from S700 to S90	Uncontaminated
Zone 1b	Drift W30 from S700 to S1950, Drift E140 from S1950 to S700, and cross drifts at S1000, S1300, S1600 and S1950.	Uncontaminated
Zone 1c	Drift W30 from S1950 to S3080, Drift E140 from S3080 to S1950, and cross drifts at S2180, S2520, S2750 and S3080.	Contaminated
Zone 2	Area around the waste shaft station including sumps	Uncontaminated
Zone 3	Drifts from S-400 to N-1100 including maintenance area	Uncontaminated
Zone 4	Experimental areas including NEXA, EXO, SDI	Uncontaminated
Zone 5	Panel 8	Uncontaminated
Zone 6	Other uncontaminated areas (e.g., panel entry drifts)	Uncontaminated
Zone 7	Panel 7 including rooms 1 to 7 and the exhaust drifts	Contaminated
Zone 8	Contaminated areas at the south end of the mine with boundaries defined by characterization	Contaminated
Zone 9	The exhaust drift and exhaust shaft	Contaminated

Work Steps for Zone Cleanup

1 Update ESS for work in cleared zones
2 Establish survey zones
3 Survey/characterize contamination within zone
4 Establish zone as radiological buffer area (RBA) or contaminated
5 If required, place CAMs and establish connectivity with surface monitoring
6 Place barriers for demarking confirmed clean areas
7 Release RBA areas for other work
  7.1 Identify equipment to be used
  7.2 Initiate equipment maintenance evaluation
  7.3 Prepare work packages as required
  7.4 Conduct operations in RBA zones as scheduled (complete actions zone by zone)
    - Conduct mine stability inspections
    - Inspect zone electrical system and clean soot as required
    - Conduct basic housekeeping activities
    - Remove trash to the surface
    - Assess smoke/fire damage
    - Clean components as required
    - Remove permanently damaged materials/equipment to the surface
    - Validate maintenance of equipment in zone
    - Schedule maintenance for equipment
    - Conduct maintenance of equipment

8 Prepare contaminated zones to release for work
  8.1 Prepare RWP for the zone
  8.2 Ensure boundaries are appropriately marked
  8.3 If not already prepared, establish change room facility
  8.4 If required, establish monitoring/counting station
  8.5 Establish contaminated clothing bins
  8.6 Establish transition (survey) zone for moving items from contaminated to non-contaminated areas
  8.7 Establish procedure for bagging items for movement from one contaminated zone to another
  8.8 Train workers to RWP and radiological worker requirements
  8.9 Train workers in donning and doffing techniques
9 Establish hot maintenance shop
  9.1 Identify area
  9.2 Create tool storage (tool crib) area
  9.3 Collect and inventory tools
  9.4 Validate calibration of tools and instruments
  9.5 Establish process for organizing, segregating and maintaining tools
10 Release contaminated areas for other work
  10.1 Identify equipment to be used
  10.2 Initiate equipment maintenance evaluation
  10.3 Prepare work packages as required
  10.4 Conduct operations in contaminated zone as scheduled
    - Conduct mine inspections
    - Inspect zone electrical system & clean soot if needed
    - Conduct basic housekeeping activities
    - Collect trash in central location for survey and disposal
    - Assess smoke/fire damage
    - Clean or remove components as required
    - Conduct maintenance of equipment

WIPP Recovery Plan Summary Schedule, Rev. 3 Schedule



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Footnote for Permanent ventilation system

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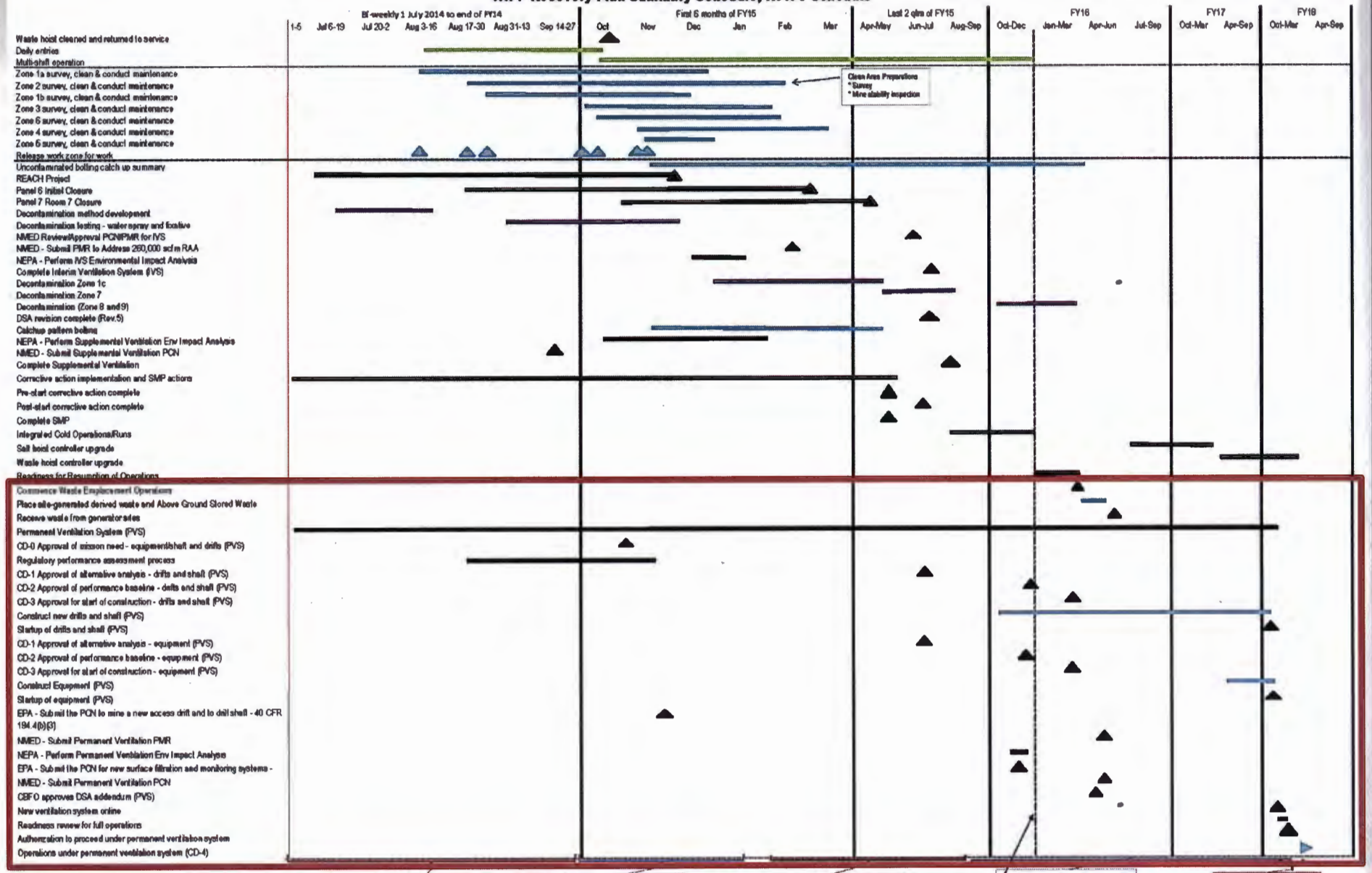
Key Activities (FY14 – mid FY16)

- Catch up bolting in uncontaminated areas – started 11/15
- Panel 6 Initial Closure – by end of March
  - Bolting required to access closure area Bolting equipment for contaminated areas being prepared
  - Decontamination testing – water spray and fixative – complete
- Interim Ventilation Installation – skid mounted HEPA units and fans
  - Filters and fans being fabricated
  - Ductwork being fabricated
  - Final procurement package in approval for remainder of electrical and mechanical components
- Decontamination activities in Panel 7 to begin in February
- Catch up bolting in contaminated areas – begin in February

Key Activities - continued

- Supplemental Ventilation Installation – provides additional air flow exhausted from the salt shaft
  - Provides unfiltered air for clean area of u/g for mining operations
  - Provides additional air routed to Panel 7 for waste emplacement
  - Design complete
- DSA Revision 5 – in progress
- Catchup Pattern Bolting
- Corrective Action Plan Implementation
  - Pre-start activities completed
- Safety Management Programs – improvements completed
- Readiness Activities for Resumption of Waste Emplacement Operations

WIPP Recovery Plan Summary Schedule, Rev. 3 Schedule



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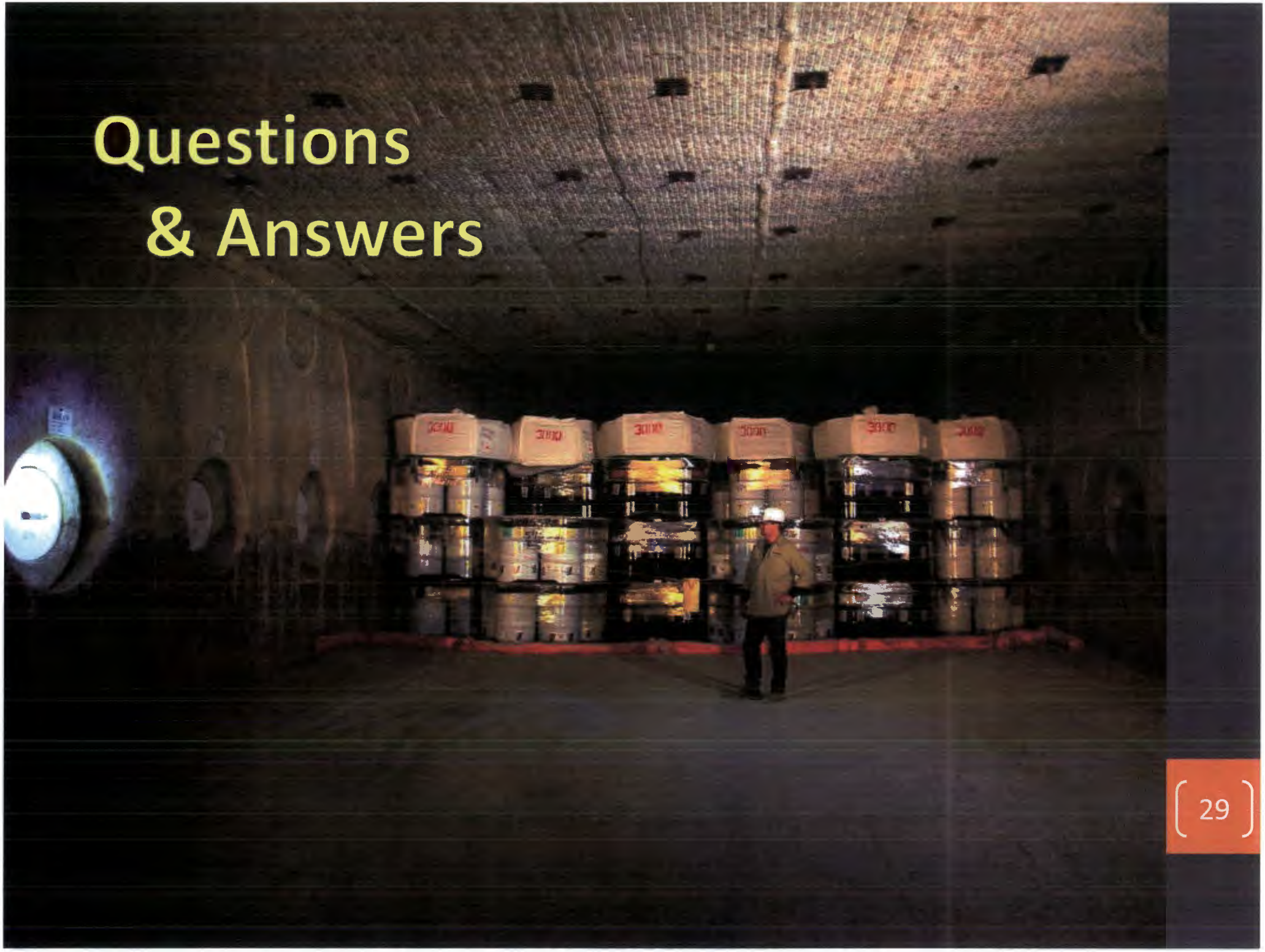
Key Activities (mid FY16 – end of FY18)

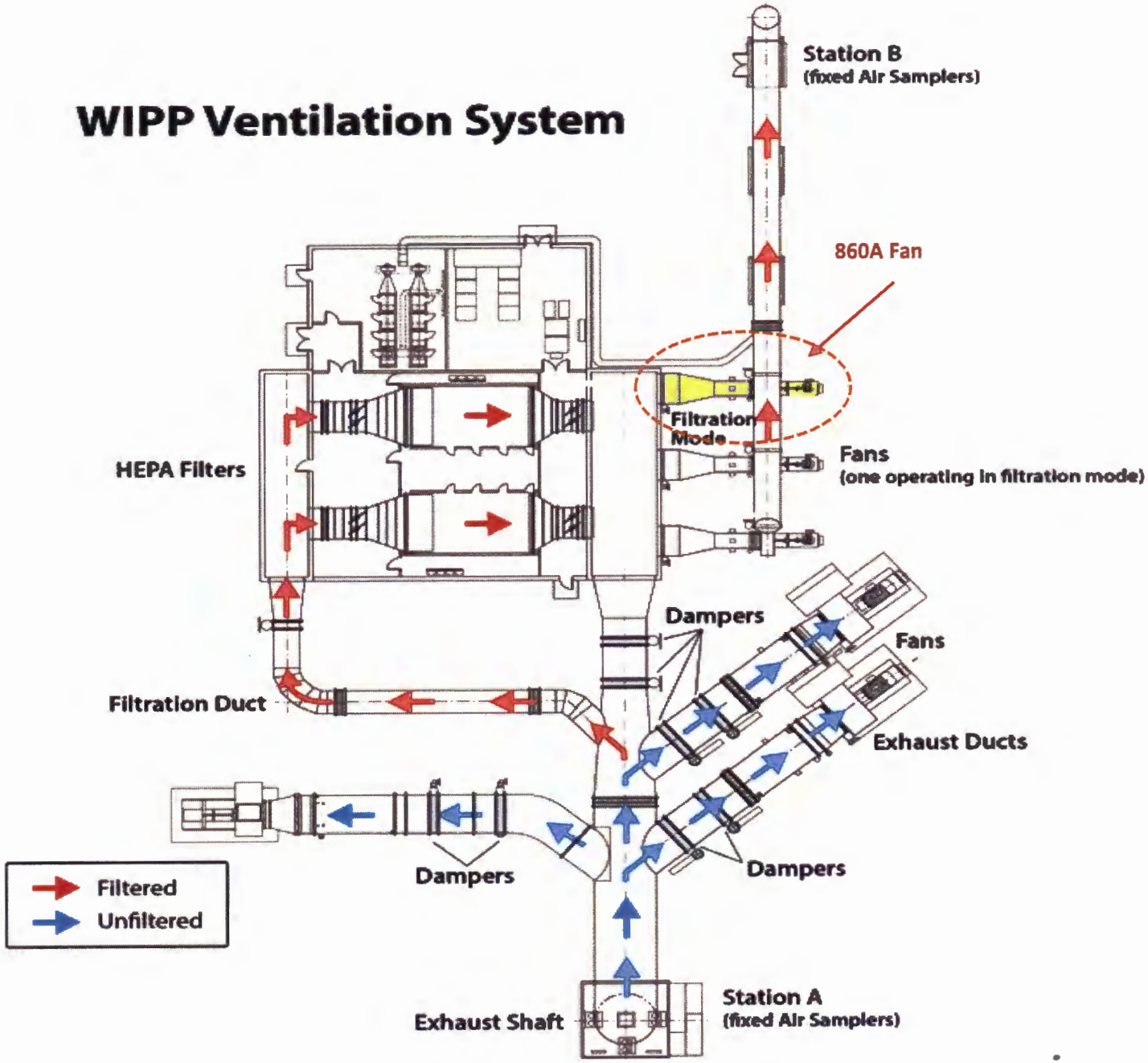
- Authorization to Proceed with Commencement of Waste Emplacement Operations
- Place site-generated derived waste and above ground stored waste in the U/G
- Receive waste from generator sites (limited shipments)
- Capital Projects
  - Mission Need Approved by DOE in October 2014
  - Alternatives Analysis scoring completed mid-December
  - Alternatives to be presented to DOE in mid-January
  - Design to begin after determination of alternative to meet the Mission Need
  - Unfiltered ventilation approach reviewed as part of the alternatives analysis

Critical Path

Recovery Actions	WIPP Summary Schedule (As of 12/31/14)			
Fiscal Year	FY14	FY15	FY16	FY17
Resume Bolting (catch-up bolting) (2/2016) Current Schedule (4/2016)				
REACH Project Current Schedule Finish video mapping (1/2015)				
Panel 6 Initial Closure (1/2015) Current Schedule (2/2015)				
Room 7, Panel 7 Closure (3/2015) Current Schedule (4/2015)				
Zone Recovery (Zones 1 – 7) (10/2015) Current Schedule (8/2015)				
Safety Management Program Improvements Current Schedule (5/2015)				
DSA Revision (7/2015) Current Schedule (7/2015)				
Interim Ventilation (6/2015) Current Schedule (5/2015)				
Supplemental Ventilation (8/2015) Current Schedule (7/2015)				
Cold Operations/CORR/DORR (3/2016) Current Schedule (3/2016)				
Commence Waste Emplacement Operations Current Schedule (3/2016)				
Permanent Ventilation Current Schedule (CD-4 2019)				CD-4 2019

Questions & Answers



Backup Slides – Start Here

WIPP Ventilation System