

Beaver Valley Power Station

Unit 1/2

1/2-ODC-1.01

ODCM: Index, Matrix and History of ODCM Changes

Document Owner
Manager, Chemistry

Revision Number	21
Level Of Use	General Skill Reference
Safety Related Procedure	Yes
Effective Date	02/11/15

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 2 of 103

TABLE OF CONTENTS

1.0	PURPOSE.....	4
2.0	SCOPE.....	4
3.0	REFERENCES AND COMMITMENTS.....	4
3.1	References Used in This Procedure.....	4
3.2	Summary of References Used Throughout Other Procedures of the ODCM	5
3.3	Commitments	15
4.0	RECORDS AND FORMS.....	15
4.1	Records	15
4.2	Forms.....	15
5.0	PRECAUTIONS AND LIMITATIONS	16
6.0	ACCEPTANCE CRITERIA.....	16
7.0	PREREQUISITES	16
8.0	PROCEDURE.....	17
8.1	Description of ODCM Structure	17
8.1.1	1/2-ODC-1.01, ODCM: Index, Matrix and History of ODCM changes	17
8.1.2	1/2-ODC-2.01, ODCM: Liquid Effluents.....	18
8.1.3	1/2-ODC-2.02, ODCM: Gaseous Effluents.....	18
8.1.4	1/2-ODC-2.03, ODCM: Radiological Environmental Monitoring Program.....	19
8.1.5	1/2-ODC-2.04, ODCM: Information Related to 40 CFR 190.....	19
8.1.6	1/2-ODC-3.01, ODCM: Dispersion Calculational Procedure and Source Term Inputs	19
8.1.7	1/2-ODC-3.02, ODCM: Bases for ODCM Controls	20
8.1.8	1/2-ODC-3.03, ODCM: Controls for RETS and REMP Programs.....	20
8.2	History Of ODCM Changes	21
8.2.1	Change (1) of BV-1 ODCM (Issue 1), Effective January, 1984	21
8.2.2	Change (2) of BV-1 ODCM (Issue 1, Rev 1), Effective October, 1984	22
8.2.3	Change (3) of BV-1 ODCM (Issue 1, Rev 2), Effective July, 1986.....	22
8.2.4	Change (4) of BV-1 ODCM (Issue 2), and BV-2 ODCM (Issue 1, Rev 1), Effective July, 1987	23
8.2.5	Change (5) of BV-1 ODCM (Issue 2, Rev 1), and BV-2 ODCM (Issue 1, Revision 2), Effective December, 1987.....	23
8.2.6	Change (6) of BV-1 ODCM (Issue 2, Rev 2), and BV-2 ODCM (Issue 1, Rev 3), Effective June, 1989	24
8.2.7	Change (7) of BV-1 and 2 ODCM (Issue 3), Effective August, 1995	26
8.2.8	Change (8) of BV-1 and 2 ODCM (Issue 3, Rev 1), Effective October, 1995....	30
8.2.9	Change (9) of BV-1 and 2 ODCM (Issue 3, Rev 2), Effective May 1997	33
8.2.10	Change (10) of BV-1 and 2 ODCM (Issue 3, Rev 3), Effective June 1997	34
8.2.11	Change (11) of BV-1 and 2 ODCM (Issue 3, Rev 4), Effective March 1998	34
8.2.12	Change (12) of BV-1 and 2 ODCM (Issue 3, Rev 5), Effective November 1998	36
8.2.13	Change (13) of BV-1 and 2 ODCM (Issue 3, Rev 6), Effective May 1999	37
8.2.14	Change (14) of BV-1 and 2 ODCM (Rev 14), Effective March 2000	38
8.2.15	Change (15) of BV-1 and 2 ODCM (Rev 15), Effective August 2000	39
8.2.16	Change (16) of BV-1 and 2 ODCM (Effective April 2002).....	40
8.2.17	Change (17) of BV-1 and 2 ODCM (Effective August 2002).....	43

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2		Level Of Use: General Skill Reference
	Revision: 21		Page Number: 3 of 103

TABLE OF CONTENTS

8.2.18	Change (18) of the BV-1 and 2 ODCM (Effective October 2002)	44
8.2.19	Change (19) of BV-1 and 2 ODCM (Effective November 2002)	45
8.2.20	Change (20) of BV-1 and 2 ODCM (Effective October 2003)	45
8.2.21	Change (21) of BV-1 and 2 ODCM (Effective November 2004)	48
8.2.22	Change (22) of BV-1 and 2 ODCM (Effective August 2006).....	51
8.2.23	Change (23) of BV-1 and 2 ODCM (Effective December 2006).....	52
8.2.24	Change (24) of BV-1 and 2 ODCM (Effective May 2007).....	54
8.2.25	Change (25) of BV-1 and 2 ODCM (Effective May 2009).....	57
8.2.26	Change (26) of BV-1 and 2 ODCM (Effective May 2009).....	62
8.2.27	Change (27) of BV-1 and 2 ODCM (Effective August 2010).....	62
8.2.28	Change (28) of BV-1 and 2 ODCM (Effective December 2010).....	67
8.2.29	Change (29) of BV-1 and 2 ODCM (Effective January 2011).....	68
8.2.30	Change (30) of BV-1 and 2 ODCM (Effective September 2011)	69
8.2.31	Change (31) of BV-1 and 2 ODCM (Effective December 2011).....	69
8.2.32	Change (32) of BV-1 and 2 ODCM (Effective February 2012).....	70
8.2.33	Change (33) of BV-1 and 2 ODCM (Effective June 2012).....	71
8.2.34	Change (34) of BV-1 and 2 ODCM (Effective July 2012)	71
8.2.35	Change (35) of BV-1 and 2 ODCM (Effective March 2013).....	72
8.2.36	Change (36) of BV-1 and 2 ODCM (Effective February 2014).....	72
8.2.37	Change (37) of BV-1 and 2 ODCM (Effective September 2014)	73
8.2.38	Change (38) of BV-1 and 2 ODCM (Effective January 2015).....	75
ATTACHMENT A	LIST OF ODCM TABLES	78
ATTACHMENT B	LIST OF ODCM FIGURES	84
ATTACHMENT C	ODCM CONTROLS PROCEDURE MATRIX	85

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 4 of 103

1.0 PURPOSE

1.1 This procedure provides an index for the entire Offsite Dose Calculation Manual (ODCM).

1.2 This procedure also provides an historical description of all changes to the ODCM.

1.3 This procedure also contains a matrix of plant procedure references for Radiological Effluent Technical Specifications (RETS), Radiological Environmental Monitoring Program (REMP) surveillances that were transferred from the Technical Specification Procedure Matrix to the ODCM via Change (8) and Change (16).

1.3.1 Prior to issuance of this procedure, these items were located in the Index and Appendix F of the old ODCM.

1.3.2 The numbering of each specific ODCM Controls, ODCM Surveillance Requirements and ODCM Controls Tables contained in this procedure does not appear to be sequential. This is intentional, as all ODCM Controls, ODCM Surveillance Requirements and ODCM Controls Tables numbers remained the same when they were transferred from the Technical Specifications Procedure Matrix. This was done in an effort to minimize the amount of plant procedure changes and to eliminate any confusion associated with numbering changes.

2.0 SCOPE

2.1 This procedure is applicable to all station personnel that are qualified to perform activities as described and referenced in this procedure.

3.0 REFERENCES AND COMMITMENTS

3.1 References Used in This Procedure

3.1.1 NUREG-0472, Draft 7 for Rev. 3, Standard Radiological Effluent Technical Specifications For PWRs September, 1982.

3.1.2 NUREG-0133, Preparation Of Radiological Effluent Technical Specifications For Nuclear Power Plants, October, 1978.

3.1.3 Generic Letter 89-01, Implementation Of Programmatic Controls For Radiological Effluent Technical Specifications In The Administrative Controls Section Of The Technical Specifications And The Relocation Of Procedural Details Of RETS To The ODCM Or To The PCP, January 31, 1989.

3.1.4 NUREG-1301, Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls For Pressurized Water Reactors, Generic Letter 89-01, Supplement No. 1, April, 1991.

3.1.5 1/2-ODC-3.03, ODCM: Controls for RETS and REMP Programs

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 5 of 103
3.1.6	1/2-ADM-1640, Control of the Offsite Dose Calculation Manual		
3.1.7	1/2-ADM-0100, Procedure Writer's Guide		
3.1.8	NOP-SS-3001, Procedure Review and Approval		
3.1.9	CR 04-09895, Missed ODCM Channel Functional Test (Gas Effluent Sampler Flowrate). CA-04, Revise ODCM procedure 1/2-ODC-1.01, Attachment C, Table F:3a to show that the Channel Functional Test requirements for the Unit 1 Sampler Flowrate Measuring Devices delineated in ODCM procedure 1/2-ODC-3.03, Attachment F, Table 4.3-13 are being met by Form 1/2-ENV-01.04.F01 instead of 1MSP-43.71-I		
3.1.10	CR 05-01169 Chemistry Action Plan For Transition of RETS, REMP and ODCM, CA-14 thru CA-21, Revise ODCM procedures to change document owner from "Manager, Radiation Protection" to Manager Nuclear Environmental & Chemistry".		
3.1.11	CR06-04908, Radiation Monitor Alarm Setpoint Discrepancies. CA-03; revise ODCM procedure 1/2-ODC-2.01 to update the alarm setpoints of [RM-1RM-100] and [RM-1DA-100] for incorporation of the Extended Power Uprate per Unit 1 TS Amendment No. 275. Also, CA-04; revised ODCM procedure 1/2-ODC-2.02 to add a "≤" designation to all alarm setpoints for Unit 1 and Unit 2 low range noble gas effluent monitors.		
3.1.12	CR06-6476, Procedure 1/2-ODC-2.01 Needs Revised for Plant Uprate. CA-01; revise ODCM procedure 1/2-ODC-2.01 to update the alarm setpoints of [2SWS-RQ101] for incorporation of the Extended Power Uprate per Unit 2 TS Amendment No. 156.		
3.2	<u>Summary of References Used Throughout Other Procedures of the ODCM</u>		
3.2.1	<u>BVPS-1 and 2 UFSAR:</u>		
3.2.1.1	BVPS-1 UFSAR Section 11.2.3; Gaseous Waste Disposal System		
3.2.1.2	BVPS-1 UFSAR Section 11.2.4; Liquid Waste Disposal System		
3.2.1.3	BVPS-2 UFSAR Section 11.2; Liquid Waste Management Systems		
3.2.1.4	BVPS-2 UFSAR Section 11.3; Gaseous Waste Management Systems		
3.2.2	<u>Condition Reports and SAP Orders:</u>		
3.2.2.1	CR 971578, MEMBERS OF THE PUBLIC Discrepancies. CA-01, Revise Section 4 of the ODCM to clarify how doses due to effluents for members of the public (conducting activities inside the site boundary) are derived and reported.		
3.2.2.2	CR 980129, ODCM Procedure Matrix Discrepancies. CA-01, Revise Appendix F of the ODCM to correct discrepancies with 1/2-OM L5 Surveillance Logs.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 6 of 103
3.2.2.3	CR 980353, EPMP 2.01 Discrepancies for Environmental Sampling Locations. CA-01, Revise Section 3 of the ODCM to correct REMP sample site distances and sectors.		
3.2.2.4	CR 981488, Chemistry Related ODCM Procedures and ODCM Appendix F References. CA-01, Revise ODCM Appendix F to add Chemistry procedure references.		
3.2.2.5	CR 981489, ODCM Table 4.11-2 Row A (Waste Gas Storage Tank Discharge Tritium). CA-01, Revise Appendix C of the ODCM (Table 4.11-2) to add clarification as to where and when tritium samples are to be obtained for GWST discharges.		
3.2.2.6	CR 981490, ODCM Table 4.11-2 Note e, and Related Chemistry Department Procedures. CA-01, Revise Appendix C of the ODCM (Table 4.11-2, Note e) to specify the proper tritium sample point.		
3.2.2.7	CR 982097, Liquid Discharge Post Release Review Methodology. CA-01, Revise Section 1 of the ODCM to add clarification for calculation of radionuclide concentration when the Post Dose Correction Factor is >1.		
3.2.2.8	CR 990025, Unnecessary Radiation Monitor Setpoint Change After Waste Discharges. No ODCM changes are required for this CR.		
3.2.2.9	CR 992652, Discrepancies Concerning ODCM Surveillances of Unit 1 Gaseous Effluent Instrumentation. CA-02, Revise Appendix F of the ODCM to make proper reference to the HP Shift logs.		
3.2.2.10	CR 993021, Apparent Failure to Test RM-DA-100 Trip Function as Required by ODCM. No ODCM changes are required for this CR.		
3.2.2.11	CR 001682, ODCM Action 28 Guidance. CA-02, Revise Appendix C of the ODCM (Table 3.3-13, Action 28) to differentiate actions associated with Inoperable Process Flow Rate Monitors vs. Sample Flow Rate Monitors.		
3.2.2.12	CR 02-05533, Procedure 1/2-ODC-3.03, ATTACHMENT E Missing Information. CA-01, Revise ODCM procedure 1/2-ODC-3.03 (Table 3.3-12) to include minimum channels operable and associated actions when Flow Rate Measurement Device [FR-1LW-103] is inoperable.		
3.2.2.13	CR 02-05711, TS and ODCM changes not reflected in 1OM-54.3.L5 Surveillance Log. CA-01, Revise 1/2-ODC-3.03 to add a requirement for applicable station groups notification of pending ODCM changes.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 7 of 103
3.2.2.14	CR 02-06174, Tracking of Activities for Unit 1 RCS Zinc Addition Implementation. CA-13, Revise ODCM procedure 1/2-ODC-1.01 to include a discussion as to why Zn-65 is being added to the ODCM. CA-14, Revise ODCM procedure 1/2-ODC-2.01 (Tables 1.1-1a and 1b) to include the addition of Zn-65 to ODCM liquid source term.		
3.2.2.15	CR 03-02466, RFA-Radiation Protection Effluent Control Provide Recommendation on Processing when Performing Weekly Sample of [1LW-TK-7A/7B]. CA-02, Revise ODCM Procedure 1/2-ODC-2.01, (Attachment D) to show the liquid waste flow path cross-connect between Unit 1 and Unit 2.		
3.2.2.16	CR 03-04830, Containment Vacuum Pump Replacement Increases ODCM Source Term. CA-03, Revise Unit 1 Containment Vacuum Pump Source-Term in ODCM procedure 1/2-ODC-2.02, Attachment A, Table 2.1-1a.		
3.2.2.17	CR 03-06123, Enhance Table 3.3-6 of 1/2-ODC-3.03 to Add More Preplanned Method of Monitoring. CA-01, Revise Table 3.3-6 and Table 4.3-3 to allow use of Eberline SPING Channel 5 as an additional 2 nd PMM when the Unit 1 Mid or High Range Noble Gas Effluent Monitors are Inoperable.		
3.2.2.18	CR 03-06281, Gaseous Tritium Sampling Required by ODCM (1/2-ODC-3.03) Unclear for Chemistry. CA-01, Revise procedure Attachment K Table 4.11-2 for RP & Chemistry sampling of Gaseous Effluent Pathways to show which effluent pathways need sampled for compliance to ODCM Control 3.11.2.1 requirements.		
3.2.2.19	CR 03-07487, Results of NQA Assessment of the Radiological Effluents Program. CA-01, Revise Calculation Package No. ERS-ATL-95-007 to clarify the term "Surface Water Supply" per guidance presented in NUREG-0800 SRP 15.7.3. CA-05, Revise 1/2-ODC3.03 Control 3.11.1.4 to update the activity limits for the outside storage tanks.		
3.2.2.20	CR 03-07668, Benchmark Effluent & Environmental Programs VS Papers Presented at 13 th REMP/RETS Workshop. CA-01, Evaluate procedure Attachment K Table 4.11-2 to reduce the amount of Effluent Samples obtained during a power transient.		
3.2.2.21	CR 03-09288, LAR 1A-321 & 2A-193, Increased Flexibility in Mode Restraints. CA-19, Review LAR 1A-321/2A-193 to identify the affected Rad Effluent procedures, programs, manuals, and applicable plant modification documents that will need to be revised to support implementing the LAR.		
3.2.2.22	CR 03-09959, RFA-Rad Protection Provide Clarification to ODCM 1/Day Air Tritium Sample. CA-01, Revise ODCM procedure 1/2-ODC-3.03 Attachment K (Table 4.11-2 note c & note e) to allow sampling of the appropriate building atmosphere.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 8 of 103
3.2.2.23	CR 03-11726, Typographical Error Found in ODCM 3.11.2.5. CA-01, Revise ODCM procedure 1/2-ODC-3.03, Attachment O, Control 3.11.2.5 to correct a typographical error. Specifically, the final word in Action (a) needs changed from "nad" to "and".		
3.2.2.24	CR 04-00149, Radiation Protection Performance Review Committee Action Items. CA-12. Incorporate the Global Positioning System [GPS] in the Radiological Environmental Monitoring Program.		
3.2.2.25	CR 04-01643, Procedure Correction – Typographical Error in the ODCM. CA-01, Revise ODCM procedure 1/2-ODC-3.03, Attachment F, (Table 3.3-13 and 4.3-13) to correct a typographical error. Specifically, the Asset Number for the Vacuum Gauge used for measurement of sample flow (from the Alternate Sampling Device) needs changed from [PI-1GW-13] to [PI-1GW-135].		
3.2.2.26	CR 04-02275, Discrepancies in Table 3.3-13 of the ODCM. CA-01, Revise ODCM procedure 1/2-ODC-3.03, Attachment F, (Table 3.3-13 and 4.3-13) to add clarification that the "Sampler Flow Rate Monitors are the devices used for "Particulate and Iodine Sampling".		
3.2.2.27	CR 05-01169, Chemistry Action Plan For Transition of RETS, REMP and ODCM, CA-14 thru CA-21, Revise ODCM procedures to change document owner from "Manager, Radiation Protection" to Manager Nuclear Environmental & Chemistry".		
3.2.2.28	CR 05-01390, Include GPS data in 2004 REMP Report and related 1/2-ODC and 1/2-ENV procedures. CA-02, revise ODCM procedure 1/2-ODC-2.03 to include an update of REMP sample locations (using the GPS Satellite data).		
3.2.2.29	CR 05-03306, Incorporated Improved Technical Specifications (ITS). This includes transfer of programmatic controls for BV-2 Noble Gas Effluent Steam Monitors [2MSS-RQ101A], [2MSS-RQ101B] and [2MSS-RQ101C] from the Technical Specifications to ODCM procedure 1/2-ODC-3.03 (Attachment D Tables 3.3-6 and 4.3-3). This was permitted via Unit 1/2 Technical Specification Amendments No. 278/161.		
3.2.2.30	CR 05-03854, ODCM Figure for Liquid Effluent Release Points Needs Updated. CA-01, revise ODCM procedure 1/2-ODC-2.01 (ODCM: Liquid Effluents) Attachment D, Figure 1.4-3 to incorporate a modified version of Plant Drawing No. 8700-RM-27F.		
3.2.2.31	CR 06-04908, Radiation Monitor Alarm Setpoint Discrepancies. CA-03; revise ODCM procedure 1/2-ODC-2.01 to update the alarm setpoints of [RM-1RM-100] and [RM-1DA-100] for incorporation of the Extended Power Uprate per Unit 1 TS Amendment No. 275. Also, CA-04; revised ODCM procedure 1/2-ODC-2.02 to add a "≤" designation to all alarm setpoints for Unit 1 and Unit 2 low range noble gas effluent monitors.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 9 of 103
3.2.2.32	CR 06-6476, Procedure 1/2-ODC-2.01 Needs Revised for Plant Upate. CA-01; revise ODCM procedure 1/2-ODC-2.01 to update the alarm setpoints of [2SWS-RQ101] for incorporation of the Extended Power Upate per Unit 2 TS Amendment No. 156.		
3.2.2.33	SAP Order 200197646-0110: Revise ODCM procedure 1/2ODC-3.03, 1/2-HPP-3.06.001, 1/2-ENV-05-01, Form 1/2-HPP-3.06.001.F05 and Form 1/2-ENV-05.1.F05 to incorporate revised outside liquid storage tank activity limits via Calculation Package No. ERS-ATL-95-007, R2.		
3.2.2.34	SAP Order 200240681: Revise ODCM procedure 1/2-ODC-3.03 (Attachment E Table 3.3-12) to add an alternate Action when the primary Flow Rate Measurement Device [FT-1CW-101-1] is not OPERABLE. The alternate Action (25A) uses local measurements (as described in 1MSP-31.06-I) to determine a total dilution flow rate during liquid effluent releases.		
3.2.2.35	CR 06-04944: ODCM 3.03 Attachment E conflict between Applicability and Action Statement. CA-01; revise ODCM procedure 1/2-ODC-3.03, Attachment E to clarify Applicability for tank level indicating devices is during addition to the tank.		
3.2.2.36	CR 07-12924 and SAP Order 200247228-0410: Revise ODCM procedure 1/2-ODC-3.03 (Attachment F Tables 3.3-13 and 4.3-13) to clarify the Functional Location of the Sampler Flow Rate Monitors for the BV-2 gaseous effluent release pathways. Specifically, the procedure was changed to refer to Functional Location [2HVS-FIT101-1] instead of [2HVS-FIT101], [2RMQ-FIT301-1] instead of [2RMQ-FIT301], [2HVL-FIT112-1] instead of [2HVL-FIT112], and [2RMQ-FIT303-1] instead of [2RMQ-FIT303].		
3.2.2.37	CR 09-53803-10: Revise ODCM procedure 1/2-ODC-3.03 to add EAL related area and process monitors to Attachment D Tables 3.3-6 and 4.3-3		
3.2.2.38	CR 09-53803-13: Revise ODCM procedure 1/2-ODC-1.01 to add appropriate MSP and OST references for EAL related area and process monitors to the procedure matrix.		
3.2.2.39	SAP Order 200257692-0360 and 0390: Revise the procedure matrix of 1/2-ODC-1.01 to remove obsolete forms and procedures used for ODCM Channel Checks. Specifically, Form 1/2-ADM-0606.F01, Form 1/2-ADM-0606.F02, Form 1/2-HPP-3.07.003.F01 and procedures 1/2-HPP-3.06.005, 1/2-HPP-3.06.006 and 1/2-HPP-3.06.012 were removed from the Attachment C Tables of the procedure matrix.		
3.2.2.40	SAP Order 200197646-0300 and CR 07-31083: Revise ODCM procedure 1/2-ODC-3.03 to add a definition for Channel Functional Test, and revise the definition for Channel Operational Test to indicate that these definitions have the same requirements and, therefore, are considered equal.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 10 of 103
3.2.2.41	SAP Order 200247228-0450: Revise 1/2-ODC-3.03 Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 & 4.3-13 to provide added clarifications, as follows: (1) add the word "or" where it is missing from Attachment F, Table 3.3-13 and 4.3-13, (2) remove grab samples from the list of alternates in Table 3.3-13 and 4.3-13, because a grab sample is an "action", not an "alternate", (3) add notations in Table 3.3-12 and 3.3-13 to indicate that Condition Report generation and reporting in the Radioactive Effluent Release Report (per Control 3.3.3.9 Action b and 3.3.3.10 Action b) do not apply when using an alternate to satisfy inoperability of the primary instrument beyond 30 days, and (4) remove surveillances for Preplanned Method of Monitoring (PMM) from Table 4.3-3, because surveillances only apply to instruments, not methods.		
3.2.2.42	SAP Order 200240681-0020 and 0040: Revise 1/2-ODC-3.03 Attachment E, Table 3.3-12, Table 4.3-12 and Action 25A to clarify the 1 st and 2 nd alternates to the flow rate measurement devices used for the cooling tower blowdown line.		
3.2.2.43	CR 05-00004-15, CR 05-00004-17 and SAP Order 200197646-0010 to revise 1/2-ODC-2.01. Add the Coolant Recovery Tanks [1BR-TK-4A/4B] as Liquid Waste Tanks to Section 8.4 description and Attachment D Figures 1.4-1 and 1.4-2. Add a default 2-tank volume recirculation time of 45.7 hrs for the Coolant Recovery Tanks [1BR-TK-4A/4B] to Attachment B Table 1.2-1a. Add the Cesium Removal Ion Exchangers [1BR-I-1A/1B and 2BRS-IOE21A/21B] to Section 8.4 description and Attachment B Figures 1.4-1 and 1.4-2. Revise the recirculation times in Attachment B Table 1.2-1a and 1.2-1b to indicate the times for nominal tank volume and maximum tank volume.		
3.2.2.44	SAP Order 200197646-0660. Revise 1/2-ODC-2.01 Attachment D Figure 1.4-3 to remove STP Outfalls 113 and 203 due to retirement of the Sewage Treatment Plants and to remove Outfall 501. Water is no longer discharged via these outfalls.		
3.2.2.45	SAP Order 200197646-0810. Revise 1/2-ODC-2.01 to incorporate alarm setpoints for all possible detector combinations for [RM-1DA-100]. Specifically, due to obsolescence of the original Model 843-30 and 843-32 detectors that were previously installed in [RM-1DA-100], the vendor has upgraded them to Model 843-30R and 843-32R detectors, which include upgraded efficiency data as well.		
3.2.2.46	CR 10-77489, Procedure 1/2-ODC-2.03 needs revised for labeling discrepancies. Corrected sampling location descriptions for REMP TLD #94 and #95; Changed sample designation from #49 to #49A; Clarified program requirements for garden sampling.		
3.2.2.47	CR 10-86844 revises 1/2-ODC-2.01 to remove description that batch releases of liquid waste are processed by recirculation through eductors. Deleted Attachment B which referenced minimum liquid waste batch release recirculation times and added description that liquid waste recirculation times to achieve two tank volumes are calculated based upon actual tank volume and pump capacity.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 11 of 103
3.2.2.48	CR 10-85877, Selenium-75 (Se-75) discharge via U1/U2 Process Vent. CA-02 revises ODCM procedure 1/2-ODC-2.02 to include dose factors for Se-75 (documented in RFCA Packages # BV20100284, BV20100285, and BV20110013).		
3.2.2.49	CA G203-2011-97516-001, Retire TLD Station #88 and add Station #88A.		
3.2.2.50	CR G203-2011-02332, Inability to meet ODCM requirements for REMP milk sampling in 2011 and CA G203-2011-02332-1, Make changes to the ODCM.		
3.2.2.51	ECP 11-0049 and CR 2012-02583 implement changes to the design of the liquid waste system for Phase 2 of Coolant Recovery Project.		
3.2.2.52	SAP Notification 600747531, Update 1/2-ODC-2.01 for RM-1RW-100.		
3.2.2.53	CR-2012-05875, Antimony-126 identified in the liquid waste system.		
3.2.2.54	SAP Notification 600765150, Request from Operations to allow discharge of water in high level drains tanks [LW-TK-2A/B] through low level waste tanks [LW-TK-3A/B] via RM-LW-104.		
3.2.2.55	CA 2012-15547-7, To address the extent of condition with potential gaps in Radiological Effluent Program, evaluate the need to place appropriate ODCM controls on various non-radiological tanks and sumps throughout the site.		
3.2.3	<u>Calculation Packages:</u>		
3.2.3.1	ERS-ATL-83-027; Liquid Waste Dose Factor Calculation for HPM-RP 6.5, Issue 3 and Later		
3.2.3.2	ERS-SFL-85-031; Gaseous Effluent Monitor Efficiency Data		
3.2.3.3	ERS-ATL-86-008; ODCM Alarm Setpoint Revisions for Gaseous Monitors		
3.2.3.4	ERS-HHM-87-014; Unit 1/2 ODCM Gaseous Effluent Monitor Alarm Setpoint Determinations		
3.2.3.5	ERS-ATL-87-026; BVPS-1 and BVPS-2 ODCM T Factor Justification		
3.2.3.6	ERS-ATL-89-014; Verification/Validation of ODCM R Values		
3.2.3.7	ERS-ATL-90-021; Justification for Removal of Technical Specification Process Flowrate Measurement Requirements for 2RMQ-RQ301, 2RMQ-RQ303 and 2HVL-RQ112		
3.2.3.8	ERS-ATL-95-006; Re-evaluation of TS/ODCM SR's 4.11.1.1.3, 4.11.1.1.4 and Notes e and g of TS/ODCM Table 4.11-1		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 12 of 103
3.2.3.9	ERS-ATL-95-007; Verification of Outside Storage Tank Activity Limit of TS 3.11.1.4		
3.2.3.10	Stone and Webster UR(B)-160; BVPS Liquid Radwaste Releases and Concentrations - Expected and Design Cases (Per Unit and Site)		
3.2.3.11	Vendor Calculation Package No. 8700-UR(B)-223, Impact of Atmospheric Containment Conversion, Power Uprate, and Alternate Source Terms on the Alarm Setpoints for the Radiation Monitors at Unit 1		
3.2.3.12	Engineering Change Package No. ECP-04-0440, Extended Power Uprate (Unit 1)		
3.2.3.13	Vendor Calculation Package No. 8700-UR(B)-508, Impact of Atmospheric Containment Conversion, Power Uprate, and Alternate Source Terms on the Alarm Setpoints for the Radiation Monitors at Unit 2		
3.2.3.14	Engineering Change Package No. ECP-04-0440, Extended Power Uprate (Unit 2)		
3.2.3.15	ERS-MPD-93-007, BVPS-1 Gaseous Radioactivity Monitor Emergency Action Levels		
3.2.3.16	ERS-ATL-93-021, Process Alarm Setpoints for Liquid Effluent Monitors		
3.2.3.17	ERS-LMR-12-001, ODCM P and R Values for Carbon-14		
3.2.3.18	Engineering Change Package No. ECP-12-0478 Liquid Waste Demin Project: Installation of new Demineralizers in Solid Waste Building		
3.2.4	<u>Internal Letters:</u>		
3.2.4.1	DLC Response to NRC Unresolved Item 50-334/83-30-05, Radiation Monitor Study- Particle Distribution Evaluation, November 26, 1986.		
3.2.4.2	ND1SHP:776, BVPS-1 ODCM Table 2.2-2, Appendix B, February 12, 1988		
3.2.4.3	ND3NSM:3431; Technical Specification Verification Effort, August 11, 1988		
3.2.4.4	NDLNSM:3522; Technical Specification Verification Effort Checklist, September 14, 1988		
3.2.4.5	ND1NSM:3652; Technical Specification Verification Effort, November 21, 1988		
3.2.4.6	NPD3SHP:2466; Self Assessment of the Liquid and Gaseous Effluent Processes at BVPS - Final Report, July 16, 1997		
3.2.4.7	NPD3SHP:2257; ODCM Liquid Waste Recirculation Rates, February 11, 1998		
3.2.4.8	NPD3SHP:2643; Action 28 of ODCM Appendix C Table 3.3-13, January 14, 1999		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 13 of 103
<p>3.2.4.9 ND3MNO:4309; Response to Request for Technical Specification Interpretation, April 20, 1999.</p> <p>3.2.5 <u>Contractor Technical Evaluation Reports:</u></p> <p>3.2.5.1 EGG-PHY-8194; Technical Evaluation Report for the Evaluation of ODCM Updated through Issue 2, Revision 1, Beaver Valley Power Station, Unit 1, September 1988</p> <p>3.2.5.2 EGG-PHY-8217; Technical Evaluation Report for the Evaluation of ODCM updated through Issue 1, Revision 2, Beaver Valley Power Station, Unit 2, September 1988</p> <p>3.2.5.3 NUS-2173; Development of Terrain Adjustment Factors For Use at the Beaver Valley Power Station for the Straight-Line Atmospheric Dispersion Model, June 1978</p> <p>3.2.5.4 UCRL-50564; Concentration Factors of Chemical Elements in Edible Aquatic Organisms, Revision 1, 1972</p> <p>3.2.6 <u>NRC Letters:</u></p> <p>3.2.6.1 Unit 1 Technical Specification Amendment 66, March 28, 1983</p> <p>3.2.6.2 Beaver Valley Unit 2 - Offsite Dose Calculation Manual, ODCM (TAC 63996), July 14, 1987</p> <p>3.2.6.3 Beaver Valley Units 1 and 2 - Acceptance of the Offsite Dose Calculation Manuals (TAC 93996 and 67421), March 2, 1989</p> <p>3.2.6.4 Unit 1/2 Technical Specification 6.8.6, including Amendments 1A-188/2A-70 (LAR 1A-175/2A-37), Implemented August 7, 1995</p> <p>3.2.6.5 Unit 1/2 Technical Specification 6.8.6, including Amendments 1A-194/2A-77 (LAR's 1A-231/2A-101), Implemented December 1, 1995</p> <p>3.2.6.6 Unit 1/2 Technical Specification Figure 5.1-2, including Amendments 1A-202/2A-83 (LAR 1A-234/2A-107, Implemented June 9, 1997</p> <p>3.2.6.7 Unit 1/2 Technical Specifications 6.9.1.10 and 6.9.2, including Amendments 1A-220/2A-97 (LAR 1A-246/2A-116), Implemented May 20, 1999</p> <p>3.2.6.8 Unit 1/2 Technical Specification 3.3.3.1, including Amendments 1A-246/2A-124 (LAR 1A-287/2A-159), Implemented April 11, 2002</p> <p>3.2.6.9 Unit 1/2 Technical Specifications 3.11.1.4, 3.11.2.5, 6.8.6, and 6.9.2 including Amendments 1A-250/2A-130 (LAR 1A-291/2A-163), Implemented August 7, 2002</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title:		Unit: 1/2	Level Of Use: General Skill Reference
ODCM: Index, Matrix and History of ODCM Changes		Revision: 21	Page Number: 14 of 103
<p>3.2.7 <u>NUREG's:</u></p> <p>3.2.7.1 NUREG-0017, Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Pressurized Water Reactors, (PWR- Gale Code), Revision 1, April 1985</p> <p>3.2.7.2 NUREG 0133; Preparation of Radiological Effluent Technical Specification for Nuclear Power Plants, October 1978</p> <p>3.2.7.3 NUREG-0172; Age-Specific Radiation Dose Commitment Factors for a One-Year Chronic Intake, November 1977</p> <p>3.2.7.4 NUREG-0324, XOQDOQ, Program for the Meteorological Evaluation of Routine Releases at Nuclear Power Stations, September 1977</p> <p>3.2.7.5 NUREG-0472; Radiological Effluent Technical Specifications for PWR's.</p> <p>3.2.7.6 NUREG-0800, Standard Review Plan, Postulated Radioactive Releases Due to Liquid-Containing Tank Failures, July 1981</p> <p>3.2.7.7 NUREG-1301; Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors (Generic Letter 89-01, Supplement No. 1), April 1991</p> <p>3.2.7.8 NUREG-1431; Standard Technical Specification - Westinghouse Plants Specifications</p> <p>3.2.7.9 NUREG/CR-2919; Meteorological Evaluation of Routine Effluent Releases At Nuclear Power Stations, September 1982</p> <p>3.2.8 <u>Regulatory Guides:</u></p> <p>3.2.8.1 RG-1.23; Meteorological Measurement Program For Nuclear Power Plants</p> <p>3.2.8.2 RG-1.109; Calculation of Annual Doses to Man From Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I, April 1977</p> <p>3.2.8.3 RG-1.111; Methods For Estimating Atmospheric Transport And Dispersion of Gaseous Effluents In Routine Releases From Light-Water-Cooled Reactors, Revision 1, July 1977</p> <p>3.2.8.4 RG-1.113; Estimating Aquatic Dispersion of Effluents From Accidental and Routine Reactor Releases For The Purpose of Implementing Appendix I, April 1977</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 15 of 103

3.3 Commitments

3.3.1 10 CFR Part 20, Standards for Protection Against Radiation

3.3.2 10CFR20.1302, Compliance with Dose Limits for Individual Members of the Public.

3.3.3 10 CFR Part 50, Domestic Licensing of Production and Utilization Facilities

3.3.4 10CFR50.36a, Technical Specifications on Effluents from Nuclear Power Reactors

3.3.5 Appendix I to 10 CFR Part 50, Numerical Guides For Design Objectives and Limiting Conditions For Operation to Meet The Criterion "As Low As Reasonably Achievable" For Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents

3.3.6 40 CFR Part 141

3.3.7 40 CFR Part 190, Environmental Radiation Protection Standards For Nuclear Power Operations

3.3.8 Licensee Response to NRC Unresolved Item 50-334/83-30-05. The Radiation Monitor Particle Distribution Evaluation showed that the Licensee must continue to use correction factors to determine particulate activity in samples obtained from the effluent release pathways.

3.3.9 CR 05-03854, ODCM Figure for Liquid Effluent Release Points Need Updated. CA-01, revise ODCM procedure 1/2-ODC-2.01 (ODCM: Liquid Effluents) Attachment D, Figure 1.4-3 to incorporate a modified version of Plant Drawing No. 8700-RM-27F.

3.3.10 10 CFR 72.104, Criteria for Radioactive Materials in Effluents and Direct Radiation from an ISFSI or MRS.

4.0 RECORDS AND FORMS

4.1 Records

4.1.1 Any calculation supporting ODCM changes shall be documented, as appropriate, by a retrievable document (e.g.; letter or calculation package) with an appropriate RTL number.

4.1.2 Changes to the ODCM shall be documented and records of reviews shall be retained in accordance with the applicable record retention provisions of the quality assurance program description included in the Updated Final Safety Analysis Report.

4.2 Forms

4.2.1 None

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 16 of 103	

5.0 PRECAUTIONS AND LIMITATIONS

5.1 This OFFSITE DOSE CALCULATION MANUAL (ODCM) provides the information and methodologies to be used by Beaver Valley Power Station Unit 1 and Unit 2 (BV-1) and (BV-2) to assure compliance with the Administrative Controls Section of the operating Technical Specifications. They are intended to show compliance with 10 CFR 20.1302,^(3.2.1) 10 CFR 50.36a,^(3.2.2) Appendix I of 10 CFR Part 50,^(3.2.3) and 40 CFR Part 190.^(3.2.4)

5.2 This ODCM is based on the NUREG's and Generic Letter documents from the United States Nuclear Regulatory Commission.^(3.1.1, 3.1.2, 3.1.3, 3.1.4) Specific plant procedures for implementation of the ODCM are included in various site procedures and documents, and are utilized by the operating staff to assure compliance with Technical Specifications and the CONTROLS Procedure of the ODCM.^(3.1.5)

5.3 The ODCM has been prepared as generically as possible in order to minimize the need for future versions. However, some changes to the ODCM may be necessary in the future. Any such changes will be properly prepared, reviewed, and approved as indicated in the Administrative Control Section of the Technical Specifications.

5.3.1 An implementation procedure for control of the ODCM is included in 1/2-ADM-1640.^(3.1.6)

5.4 This procedure also contains information that was previously contained in Appendix F of the previous BV-1 and 2 Offsite Dose Calculation Manual.

5.4.1 In regards to this, the Tables that were transferred from Appendix F to the appropriate ATTACHMENTS of this procedure will still contain a prefix denoting an "F".

6.0 ACCEPTANCE CRITERIA

6.1 All changes to this procedure shall contain sufficient justification that the change will maintain the level of radioactive Effluent Control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50, and not adversely impact the accuracy or reliability of effluent dose or alarm setpoint calculation.^(3.1.7)

6.1.1 All changes to this procedure shall be prepared in accordance with 1/2-ADM-0100^(3.1.7) and 1/2-ADM-1640.^(3.1.6)

6.1.2 All changes to this procedure shall be reviewed and approved in accordance with NOP-SS-3001^(3.1.8) and 1/2-ADM-1640.^(3.1.6)

7.0 PREREQUISITES

7.1 The user of this procedure shall be familiar with ODCM structure and content.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title:		Unit: 1/2	Level Of Use: General Skill Reference
ODCM: Index, Matrix and History of ODCM Changes		Revision: 21	Page Number: 17 of 103
8.0 <u>PROCEDURE</u>			
8.1 <u>Description of ODCM Structure</u>			
8.1.1 <u>1/2-ODC-1.01, ODCM: Index, Matrix and History of ODCM changes</u> (formerly: ODCM Index and Appendix F)			
8.1.1.1 History of ODCM Changes			
8.1.1.2 Summary of ODCM References			
8.1.1.3 List of Tables (ATTACHMENT A)			
8.1.1.4 List of Figures (ATTACHMENT B)			
8.1.1.5 Matrix of Procedures Used to Meet ODCM Controls (ATTACHMENT C)			
8.1.1.5.1 BV-1 Radiation Monitor Surveillances			
8.1.1.5.2 BV-1 Liquid Effluent Monitor Surveillances			
8.1.1.5.3 BV-2 Liquid Effluent Monitor Surveillances			
8.1.1.5.4 BV-1 Gaseous Effluent Monitor Surveillances			
8.1.1.5.5 BV-2 Gaseous Effluent Monitor Surveillances			
8.1.1.5.6 BV-1 and 2 Liquid Effluent Concentration Surveillances			
8.1.1.5.7 BV-1 and 2 Liquid Effluent Dose Surveillances			
8.1.1.5.8 BV-1 and 2 Liquid Effluent Treatment Surveillances			
8.1.1.5.9 BV-1 and 2 Gaseous Effluent Air Dose Surveillances			
8.1.1.5.10 BV-1 and 2 Gaseous Effluent Particulate and Iodine Surveillances			
8.1.1.5.11 BV-1 and 2 Gaseous Effluent Treatment Surveillances			
8.1.1.5.12 BV-1 and 2 Gaseous Effluent Total Dose Surveillances			
8.1.1.5.13 BV-1 and 2 Gaseous Effluent REMP Surveillances			
8.1.1.5.14 BV-1 and 2 Gaseous Effluent Land Use Census Surveillances			
8.1.1.5.15 BV-1 and 2 Gaseous Effluent Interlaboratory Comparison Program Surveillances			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 18 of 103
<p>8.1.2 <u>1/2-ODC-2.01, ODCM: Liquid Effluents</u> (formerly; ODCM Sections 1 and 5)</p> <p>8.1.2.1 Alarm Setpoints</p> <p>8.1.2.1.1 BV-1 Setpoint Determination Based On A Conservative Mix</p> <p>8.1.2.1.2 BV-1 Setpoint Determination Based On Analysis Prior To Release</p> <p>8.1.2.1.3 BV-2 Setpoint Determination Based On A Conservative Mix</p> <p>8.1.2.1.4 BV-2 Setpoint Determination Based On Analysis Prior To Release</p> <p>8.1.2.2 Compliance With 10 CFR 20 EC Limits</p> <p>8.1.2.2.1 Batch Releases</p> <p>8.1.2.2.2 Continuous Releases</p> <p>8.1.2.3 Compliance With 10 CFR 50 Dose Limits</p> <p>8.1.2.3.1 Cumulation Of Doses</p> <p>8.1.2.3.2 Projection Of Doses</p> <p>8.1.2.4 Liquid Radwaste Treatment System</p> <p>8.1.2.4.1 BV-1 Liquid Radwaste Treatment System Components</p> <p>8.1.2.4.2 BV-1 Laundry and Contaminated Shower Drain System Components</p> <p>8.1.2.4.3 BV-2 Liquid Radwaste Treatment System Components</p> <p>8.1.2.5 Site Boundary for Liquid Effluents</p> <p>8.1.2.5.1 Liquid Effluent Site Boundary</p> <p>8.1.3 <u>1/2-ODC-2.02, ODCM: Gaseous Effluents</u> (formerly; ODCM Sections 2 and 5)</p> <p>8.1.3.1 Alarm Setpoints</p> <p>8.1.3.1.1 BV-1 Setpoint Determination Based On A Calculated Mix</p> <p>8.1.3.1.2 BV-1 Setpoint Determination Based On Analysis Prior To Release</p> <p>8.1.3.1.3 BV-2 Setpoint Determination Based On A Calculated Mix</p> <p>8.1.3.1.4 BV-2 Setpoint Determination Based On Analysis Prior To Release</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 19 of 103
<div>8.1.3.1.5 BV-1/2 Setpoint Determination Based On A Calculated Mix</div> <div>8.1.3.1.6 BV-1/2 Setpoint Determination Based On Analysis Prior To Release</div> <div>8.1.3.2 Compliance With 10 CFR 20 Dose Rate Limits</div> <div>8.1.3.2.1 Dose Rate Due To Noble Gases</div> <div>8.1.3.2.2 Dose Rate Due To Radioiodines And Particulates</div> <div>8.1.3.3 Compliance With 10 CFR 50 Dose Limits</div> <div>8.1.3.3.1 Doses Due To Noble Gases</div> <div>8.1.3.3.2 Doses Due To Radioiodines And Particulates</div> <div>8.1.3.4 Gaseous Radwaste Treatment System</div> <div>8.1.3.4.1 BV-1 Gaseous Radwaste Treatment System Components</div> <div>8.1.3.4.2 BV-2 Gaseous Radwaste Treatment System Components</div> <div>8.1.3.5 Site Boundary for Gaseous Effluents</div> <div>8.1.4 <u>1/2-ODC-2.03, ODCM: Radiological Environmental Monitoring Program</u> (formerly; ODCM Section 3)</div> <div>8.1.4.1 Program Requirements</div> <div>8.1.5 <u>1/2-ODC-2.04, ODCM: Information Related to 40 CFR 190</u> (formerly; ODCM Section 4)</div> <div>8.1.5.1 Compliance with 40 CFR 190 Dose Limits</div> <div>8.1.5.2 Report Requirements</div> <div>8.1.5.3 Inside the Site Boundary Radiation Doses</div> <div>8.1.5.3.1 Gaseous Effluent Site Boundary</div> <div>8.1.6 <u>1/2-ODC-3.01, ODCM: Dispersion Calculational Procedure and Source Term Inputs</u> (formerly; ODCM Appendix A & B)</div> <div>8.1.6.1 Dispersion and Deposition Parameters</div> <div>8.1.6.2 BV-1 and 2 Release Conditions</div> <div>8.1.6.3 BV-1 Liquid Source Term Inputs</div>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 20 of 103	
<div>8.1.6.4 BV-2 Liquid Source Term Inputs</div> <div>8.1.6.5 BV-1 Gaseous Source Term Inputs</div> <div>8.1.6.6 BV-2 Gaseous Source Term Inputs</div> <div>8.1.7 <u>1/2-ODC-3.02, ODCM: Bases for ODCM Controls</u> (formerly; ODCM Appendix D)</div> <div>8.1.7.1 Bases 3.3.3.1: Radiation Monitoring Instrumentation</div> <div>8.1.7.2 Bases 3.3.3.9: Radioactive Liquid Effluent Monitoring Instrumentation</div> <div>8.1.7.3 Bases 3.3.3.10: Radioactive Gaseous Monitoring Instrumentation</div> <div>8.1.7.4 Bases 3.11.1.1: Liquid Effluent Concentration</div> <div>8.1.7.5 Bases 3.11.1.2: Liquid Effluent Dose</div> <div>8.1.7.6 Bases 3.11.1.3: Liquid Radwaste Treatment System</div> <div>8.1.7.7 Bases 3.11.1.4: Liquid Holdup Tanks</div> <div>8.1.7.8 Bases 3.11.2.1: Gaseous Effluent Dose Rate</div> <div>8.1.7.9 Bases 3.11.2.2: Dose- Noble Gases</div> <div>8.1.7.10 Bases 3.11.2.3: Dose - Radioiodines, Radioactive Material in Particulate Form, and Radionuclides Other Than Noble Gases</div> <div>8.1.7.11 Bases 3.11.2.4: Gaseous Radwaste Treatment System</div> <div>8.1.7.12 Bases 3.11.2.5: Gas Storage Tanks</div> <div>8.1.7.13 Bases 3.11.4.1: Total Dose</div> <div>8.1.7.14 Bases 3.12.1: REMP Program Requirements</div> <div>8.1.7.15 Bases 3.12.2: REMP - Land Use Census</div> <div>8.1.7.16 Bases 3.12.3: REMP - Interlaboratory Comparison Program</div> <div>8.1.8 <u>1/2-ODC-3.03, ODCM: Controls for RETS and REMP Programs</u> (formerly; ODCM Appendix C)</div> <div>8.1.8.1 Controls 3.0.1 thru 3.0.4: Applicability</div> <div>8.1.8.2 Controls 4.0.1 thru 4.0.4: Surveillance Requirements</div>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 21 of 103
8.1.8.3	Control 3.3.3.1: Radiation Monitoring Instrumentation		
8.1.8.4	Control 3.3.3.9: Radioactive Liquid Effluent Monitoring Instrumentation		
8.1.8.5	Control 3.3.3.10: Radioactive Gaseous Monitoring Instrumentation		
8.1.8.6	Control 3.11.1.1: Liquid Effluent Concentration		
8.1.8.7	Control 3.11.1.2: Liquid Effluent Dose		
8.1.8.8	Control 3.11.1.3: Liquid Radwaste Treatment System		
8.1.8.9	Control 3.11.1.4: Liquid Holdup Tanks		
8.1.8.10	Control 3.11.2.1: Gaseous Effluent Dose Rate		
8.1.8.11	Control 3.11.2.2: Dose- Noble Gases		
8.1.8.12	Control 3.11.2.3: Dose - Radioiodines, Radioactive Material in Particulate Form, and Radionuclides Other Than Noble Gases		
8.1.8.13	Control 3.11.2.4: Gaseous Radwaste Treatment System		
8.1.8.14	Control 3.11.2.5: Gas Storage Tanks		
8.1.8.15	Control 3.11.4.1: Total Dose		
8.1.8.16	Control 3.12.1: REMP Program Requirements		
8.1.8.17	Control 3.12.2: REMP - Land Use Census		
8.1.8.18	Control 3.12.3: REMP - Interlaboratory Comparison Program		
8.1.8.19	Control 6.9.2: Annual REMP Report		
8.1.8.20	Control 6.9.3: Annual RETS Report		
8.2	<u>History Of ODCM Changes</u>		
8.2.1	<u>Change (1) of BV-1 ODCM (Issue 1), Effective January, 1984</u>		
8.2.1.1	This is the initial issue of the BV-1 ODCM, as prepared for implementation of the Radiological Effluent Technical Specifications (RETS). Implementation of this manual was commensurate with Amendment No. 66 to the Unit 1 Technical Specifications as approved by the NRC on March 28, 1983.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 22 of 103
8.2.2 <u>Change (2) of BV-1 ODCM (Issue 1, Rev 1), Effective October, 1984</u>			
8.2.2.1 A description of the changes implemented with this revision are as follows:			
8.2.2.1.1 <u>Section 1.0:</u> Table 1.3-1 was revised to include liquid dose factors for nuclides presently identified at BVPS and not included in the original table.			
8.2.2.1.2 <u>Section 2.0:</u> Equations 2.1-19 and 2.1-22 were revised as approved at RSC Meeting No. BVPS-RSC-1-84 on January 31, 1984. The equations were revised to clarify flow rate terminology.			
8.2.2.1.3 <u>Section 2.0:</u> Section 2.2.2 was revised to delete the food and ground pathways for gaseous dose rate calculations of I-131, tritium, and radionuclides in particulate form with half lives greater than 8 days.			
8.2.2.1.4 <u>Section 2.0:</u> Table 2.2-13 was revised to include 7 organs rather than only the maximum organ. Also, the receptor was changed from infant to child, and addition/deletion of nuclides to be consistent with the Technical Specifications and nuclides identified at BV-1.			
8.2.3 <u>Change (3) of BV-1 ODCM (Issue 1, Rev 2), Effective July, 1986</u>			
8.2.3.1 A description of the changes that were implemented with this revision are as follows:			
8.2.3.1.1 <u>Section 1.0:</u> Provide a flow based monitor setpoint adjustment factor in Section 1.1.2. This change makes Section 1.1.2 consistent with Section 1.1.1 and current procedures.			
8.2.3.1.2 <u>Section 1.0 and 2.0:</u> Revise the 31-day dose projection limits and methodology in Sections 1.3.2, 2.3.1.2, and 2.3.2.2. This change corrected the 31-day dose projection limits and changed the dose projection methodology to be consistent with proposed software.			
8.2.3.1.3 <u>Section 2.0:</u> Revise the Gaseous Effluent Monitor Setpoints in Sections 2.1.1 and 2.1.2. They were revised due to pressure corrections determined for the detectors, changes in isotopic literature, and the addition of SPING Channel 5 alternate monitor data. The calculations supporting this item are contained in Calculation Packages ERS-SFL-85-031 and ERS-ATL-86-008.			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 23 of 103
8.2.4 <u>Change (4) of BV-1 ODCM (Issue 2), and BV-2 ODCM (Issue 1, Rev 1), Effective July, 1987</u>			
8.2.4.1 With the start-up of BV-2 in the second half of 1987, the BV-1 ODCM required revision and the BV-2 ODCM required initial implementation. A description of the changes are as follows:			
8.2.4.1.1 Produce functionally compatible BV-1 and BV-2 ODCMs which address site dose rate limits and meet regulatory requirements. Note that due to the scope of the revisions to the Unit 1 ODCM, it was re-issued as Issue 2. Also, for clarity, the draft BV-2 ODCM previously submitted to the NRC was regarded as Issue 1 (historical) and operation of BV-2 began with Issue 1, Revision 1 of the BV-2 ODCM.			
8.2.4.1.2 <u>Section 1.0</u> : A shared liquid radwaste system, permitting mixing of waste for processing, the sharing of dilution water, and the apportionment of dose according to NUREG-0133 was incorporated into both ODCMs.			
8.2.4.1.3 <u>Section 2.0</u> : A shared <u>elevated</u> gaseous radwaste system, permitting the mixing of gaseous radwaste and the apportionment of dose, according to NUREG-0133 was incorporated into both ODCMs.			
8.2.4.1.4 <u>Section 2.0</u> : Separate ground level gaseous releases were maintained. The BV-1 ODCM was updated to incorporate the BV-2 five year meteorology base. Gaseous source terms were revised to that calculated for BV-1 in the BV-2 FSAR, and terms were added for calculation of a turbine building release.			
8.2.4.1.5 <u>Section 2.0</u> : The gaseous effluent monitor alarm setpoints of both ODCMs were revised as required by revisions to meteorology, source terms, monitor efficiencies, and revised percentages of site dose rate limits.			
8.2.4.1.6 <u>Section 2.0</u> : Formal justification was provided for use of the "T" factor as described in the Containment Purge Dose Rate calculations. Whereas, the dose rate for a Containment Purge may be averaged over a time period not to exceed 960 minutes. Since the Containment air volume change time period is 60 minutes, then the maximum value for "T" is 16 (i.e., 960 minutes/60 minutes = 16).			
8.2.5 <u>Change (5) of BV-1 ODCM (Issue 2, Rev 1), and BV-2 ODCM (Issue 1, Revision 2), Effective December, 1987</u>			
8.2.5.1 <u>Section 2.0</u> : Sections 2.1.3 and 2.1.4 of both ODCMs were changed to delete a note concerning noble gas nuclides as requested by a NRC letter dated July 14, 1987 titled Beaver Valley Unit 2 - Offsite Dose Calculation Manual, ODCM (TAC 63996).			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title:		Unit: 1/2	Level Of Use: General Skill Reference
ODCM: Index, Matrix and History of ODCM Changes		Revision: 21	Page Number: 24 of 103
<p>8.2.6 <u>Change (6) of BV-1 ODCM (Issue 2, Rev 2), and BV-2 ODCM (Issue 1, Rev 3), Effective June, 1989</u></p> <p>8.2.6.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.6.1.1 <u>Section 1.0 and 2.0:</u> Both ODCMs were revised for addition of Sections 1.4 and 2.4. This addition gives a description of and includes flow diagrams of the Liquid Radwaste System and the Gaseous Radwaste System. (See justification 1)</p> <p>8.2.6.1.2 <u>Section 1.0:</u> Corrected typos to BV-1 ODCM Equation 1.1-8 to show differentiation between the two f's, and add the division sign. (See Justification 1)</p> <p>8.2.6.1.3 <u>Section 1.0:</u> Re-define F_k in equation 1.3-1 of both ODCMs, as allowed by the NRC. (See Justification 1)</p> <p>8.2.6.1.4 <u>Section 1.0 and 2.0:</u> Typos were corrected to the following: (1) BV-1 ODCM equation 1.3-7; add a division sign between the brackets. (2) BV-1 ODCM equation 1.3-8; add a division sign between the brackets. (3) Equation 2.1-20 of both ODCMs; change the HHSP to HSP multiplier from 0.70 to 0.33. (4) Equation 2.1-24 of both ODCMs, change the HHSP to HSP multiplier from 0.70 to 0.33. (See Justification 1)</p> <p>8.2.6.1.5 <u>Section 1.0 and 2.0:</u> Typos were also corrected as follows: (1) Add the words "from each reactor unit" to five places (Sections 1.3.1, 1.3.2, 2.3.1.1, 2.3.1.2, and 2.3.2.2) of both ODCMs. This ensures compliance with the current requirements of the Technical Specifications. (2) Correct punctuation in Section 2.3.2.1 of the BV-1 ODCM. (3) Correct typos in Table 3.0-1 of both ODCMs. (4) Correct typos in Figure 3.0-3 of both ODCMs.</p> <p>8.2.6.1.6 <u>Section 2.0:</u> Add a Reference to Section 2 of the BV-1 ODCM. (See Justification 3)</p> <p>8.2.6.1.7 <u>Section 2.0:</u> Add the words "from the site" to Section 2.2.2 of both ODCMs. This ensures compliance with the current requirements of the Technical Specifications. (See Justification 2)</p> <p>8.2.6.1.8 <u>Section 2.0:</u> Revise BV-1 ODCM Table 2.2-2 to change the particulate and iodine radionuclide mix for the Unit 1 Ventilation Vent and to correct a typo for Xe-135m in the Containment Vacuum Pumps. (See Justification 3)</p> <p>8.2.6.1.9 <u>Section 2.0:</u> Provide re-verified P_{it} values for the Beaver Valley site in Table 2.2-13 of both ODCMs. (See Justification 1)</p> <p>8.2.6.1.10 <u>Section 2.0:</u> Correct the definition for the t_f value in the cow-meat pathway in Section 2.3.2.1 of both ODCMs. (See Justification 1)</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 25 of 103
8.2.6.1.11	<u>Section 2.0</u> : Provide re-verified R values for the Beaver Valley site in Tables 2.3-2 through 2.3-20 of both ODCMs. (See Justification 1)		
8.2.6.1.12	<u>Appendix B</u> : Change the particulate and iodine release fractions in Appendix B of the BV-1 ODCM. (See Justification 3)		
8.2.6.2	The justification used for Change (6) to the ODCMs are as follows:		
8.2.6.2.1	<p>A letter dated March 2, 1989 (from the NRC) was received by Duquesne Light regarding acceptance of the Offsite Dose Calculation Manuals. The NRC acceptance of the BV-1 and BV-2 ODCMs was based on Technical Evaluation Reports (TER No. EGG-PHY-8194 and EGG-PHY-8217) provided by the Idaho National Engineering Laboratory.</p> <p>As stated in the letter, minor concerns are delineated in Section 4 of the TER. In general, these concerns are considered typos or additions and in one way impact any of the calculations currently being performed for dose contributions. However, one of these concerns is regarding the inability to reproduce the ODCM R values for the cow-meat, cow-milk and goat-milk pathways when using the ODCM/NUREG-0133 methodology. These R values (along with all other ODCM R values) were re-validated VIA Calculation Package No. ERS-ATL-89-014. The results of this package showed that the R values for the three aforementioned pathways were in error. <u>SINCE</u> the R values in error do not involve the controlling receptor for gaseous release (i.e.; the controlling receptor is VIA the Inhalation, Ground, and Vegetation pathways, not the pathways subject to error), <u>THEN</u> the changes will not adversely impact the accuracy or reliability of effluent dose calculations.</p>		
8.2.6.2.2	As requested by DLC letters ND3NSM:3431, ND1NSM:3522, and ND1NSM:3652, Technical Specifications were required to be verified in all plant implementing procedures. As part of this effort, wording errors/typos were identified in various sections of the ODCM. This revision corrects the anomalies identified during the verification effort.		
8.2.6.2.3	As delineated in letter ND1SHP:776, dated February 12, 1988 (BVPS-1 ODCM Table 2.2-2, Appendix B) a series of apparent discrepancies were identified between ODCM Table 2.2-2 and similar tables of the BVPS-2 FSAR. Evaluation showed that apparent credit was given for continuous filtration of SLCRS releases which is invalid at Unit 1. However, the calculation package on which the BVPS-2 FSAR expected release tables are based, is correct (i.e.; no credit was taken for routine filtration for Unit 1 releases). Except for revising the ODCM, no further corrective action is necessary because the particulates and iodines in the ODCM were not used for gaseous effluent alarm setpoint. Therefore, this change does not adversely impact the accuracy or reliability of setpoint calculations.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 26 of 103

8.2.7 Change (7) of BV-1 and 2 ODCM (Issue 3), Effective August, 1995

8.2.7.1 The combined ODCM contains the following changes:

- 8.2.7.1.1 Prior to ISSUE 3, BV-1 and BV-2 had individual ODCMs that were generically equal. In an effort to simplify the implementing documents, the ODCMs have been combined. This merger of the individual ODCMs will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50. Also, this merger will not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
- 8.2.7.1.2 Section 1.0: Revised Section 1.0 (Liquid Effluents) to show compliance with 10 CFR 20 Appendix B (20.1001 - 20.2401), Table 2, Col. 2 EC's. This includes the following: (1) Revising the alarm setpoints for monitors [RM-1LW-104, RM-1LW-116, and 2SGC-RQ100]. (2) Updating the BV-1 monitor detection efficiencies. (3) Updating discharge rate and dilution rate parameters for BV-1 and BV-2. (4) Adding the alarm setpoints for monitors [RM-1RW-100, RM-1DA-100, 2SWS-RQ101, and 2SWS-RQ102].
- 8.2.7.1.3 Section 1.0: Revised Section 1.0 (Liquid Effluents) and Section 2.0 (Gaseous Effluents) to merge the BV-1 alarm setpoint calculations with the BV-2 alarm setpoint calculations. For all practical purposes, when Tables, Figures, and Equations were transferred to the combined ODCM, the numbering was kept generically equal. The two exceptions to this are as follows: (1) If a table was contained in both ODCMs, but each had data specific to BV-1 or BV-2, then an a or b was added to the table. For example, Table 1.1-1 was previously included in the BV-1 ODCM and the BV-2 ODCM. These tables are now numbered 1.1-1a and 1.1-1b denoting BV-1 and BV-2 respectively. A cross reference for ODCM tables is provided in the Table Of Contents. (2) If an equation was contained in both ODCMs, but each had data specific to BV-1 or BV-2, then a (1) or (2) was added to the equation. For example, Equation 1.1-1 was previously included in the BV-1 ODCM and the BV-2 ODCM. These equations are now numbered 1.1(1)-1 and 1.1(2)-1, denoting BV-1 and BV-2 respectively. A cross reference for ODCM equations is provided in the Table Of Contents.
- 8.2.7.1.4 Section 3.0: Revised Section 3.0 (Radiological Environmental Monitoring Program) to list the program requirements from the Radiological Assessment Branch Technical Position (Revision 1, 1979).
- 8.2.7.1.5 Section 4.0: Revised Section 4.0 (Information Related To 40 CFR 190) to provide clarified reporting requirements for the Special Report. The clarifications were taken from Generic Letter 89-01, Supplement No. 1 (NUREG-1301).

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 27 of 103
8.2.7.1.6	<p><u>Appendix A:</u> Revised Appendix A to transfer the Batch Release dispersion parameters from Appendix A (Tables A-2 through A-5) to Section 2.3 (Tables 2.3-35 through 2.3-38). This revision was done for clarification. For example, all dispersion parameters are now included in one area of the ODCM.</p>		
8.2.7.1.7	<p><u>Appendix C:</u> This is a new Appendix to the ODCM. Procedural details for the Radiological Effluent Technical Specifications (RETS) were transferred from the Technical Specifications to Appendix C of the ODCM per Generic Letter 89-01 and Generic Letter 89-01, Supplement No. 1 (NUREG 1301). This Appendix also includes selected Definitions and Tables as delineated in the Technical Specifications (Section 1) and selected Applicability and Surveillance Requirement statements as delineated in the Technical Specifications (Section 3/4). These were added to Appendix C for reference purposes, even though they are currently described in the Technical Specification.</p>		
8.2.7.1.8	<p><u>Appendix D:</u> This is a new Appendix to the ODCM. The bases for ODCM Controls were transferred from the Bases Section of the Technical Specifications to Appendix D of the ODCM per Generic Letter 89-01.</p>		
8.2.7.1.9	<p><u>Appendix E:</u> This is a new Appendix to the ODCM. The Annual Radioactive Effluent Release Report and the Annual Radiological Environmental Report reporting requirements are listed in this appendix to the ODCM.</p>		
8.2.7.1.10	<p>There are three differences (i.e., non-editorial changes) in this ODCM revision when compared to the previous BV-1 and BV-2 Technical Specifications. These are the only changes that are identified by revision bars. These differences are as follows:</p>		
8.2.7.1.10.1	<p>First Difference - LLD Definition Clarification is described as follows: (1) There was a sentence removed in the LLD Standard Deviation Definitions delineated in Appendix C Tables 4.11-1 and 4.11-2. This sentence stated: "In calculating the LLD for a radionuclide determined by gamma ray spectrometry, the background shall include the typical contributions of other radionuclides normally present in the samples (e.g., potassium in milk samples)." (2) This sentence was removed by justification of NUREG-0472, Rev. 2 (i.e., this revision to the NUREG removed the sentence from Tables 4.11-1 and 4.11-2). At BV-1 and 2, there are <u>no</u> other radionuclides normally present in effluent samples. However, there is applicability to environmental LLD calculations due to the existence of other radionuclides in environmental samples. This sentence, therefore, will not be removed from Appendix C, Table 4.12-1. (3) Removal of the sentence from Appendix C, Tables 4.11-1 and 4.11-2 does not adversely impact the accuracy or reliability of current or past effluent LLD calculations. This change</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 28 of 103
<p>maintains the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations. (4) This change brings ODCM Appendix C, Tables 4.11-1 and 4.11-2 in generic agreement with NRC guidance (i.e., NUREG-0472) and industry standard.</p>			
8.2.7.1.10.2	<p>Second Difference - Change From Semi-Annual Report To Annual Report as follows: (1) The frequency of the Radioactive Effluent Release Report was changed from Semi-Annual to Annual. This change is justified by Federal Register, Rules And Regulations (Vol. 57, No. 169, Monday, August 31, 1992), where as; 10 CFR Part 50.36a(a)(2) states, in part. "Each licensee shall submit a report to the Commission annually that specifies the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous 12 months of operation...the time between submission of the reports must be no longer than 12 months..." (2) This change maintains the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.</p>		
8.2.7.1.10.3	<p>Third Difference - Implementation Of New 10 CFR 20 is described as follows: (1) The definition for MEMBER(S) OF THE PUBLIC was revised to agree with the definition in 10 CFR 20.1003. (2) The definition for UNRESTRICTED AREA was modified from the definition that was in the Technical Specifications prior to transferring to the ODCM. This modification was necessary to ensure that the ODCM dose model for gaseous releases is not affected. The modification involved adding the following sentence: "For gaseous release dose calculations, the UNRESTRICTED AREA should exclude any public road, railway, or waterway adjacent to or crossing the site that is not occupied continuously by MEMBER(S) OF THE PUBLIC". (3) The limits for liquid effluent concentration were changed from 1 times 10 CFR 20 Appendix B (20.1 - 20.601), Table II, Col. 2 MPC's to 10 times 10 CFR 20 Appendix B (20.1001 - 20.2401), Table 2, Col. 2 EC's. This limit will now be referred to as the ODCM Effluent Concentration Limit (OEC). (4) For gaseous effluents, no changes were made to implement the New 10 CFR 20. As justification, when the utility adopted the RETS (1/1/84), compliance to 10 CFR 20 shifted from the MPC concept to the Unrestricted Area Dose Rate concept. The Dose Rate concept is the preferred method of controlling gaseous effluent release rate, and will continue to be used in-lieu of the MPC or EC concept. (5) Changing to the OEC limit for liquid effluents accommodates needed operational</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 29 of 103	
<p>flexibility to facilitate implementation of the New 10 CFR 20 requirements. (6) For information, the general intent of the New Part 20 is that radiation doses to members of the public not exceed 100 mrem per year, which is more restrictive than the 500 mrem per year limit in the Old Part 20, and that fuel cycle licensees also comply with 40 CFR 190. The New Part 20 does not include a requirement on limiting radioactivity concentrations in effluents, which is less restrictive than the Old Part 20. (7) The basic requirements for RETS (i.e.; ODCM Appendix C Controls) are stated in 10 CFR 50.36a. These requirements indicate that compliance with the RETS will keep average annual releases of radioactive material in effluents to small percentages of the limits specified in the 10 CFR 20.106 (10 CFR 20.1302). These requirements also indicate that operational flexibility is allowed (with considerations for public health and safety) which may temporarily result in releases higher than such small percentages, but still within the MPC limits specified in the 10 CFR 20.106. The MPC's relate to an annual dose of 500 mrem. Also, 10 CFR 50.36a indicates that when using operational flexibility, best efforts shall be exerted to keep levels of radioactive materials in effluents to ALARA as set forth in 10 CFR 50 Appendix I. (8) As stated in the Introduction to Appendix B of the New 10 CFR 20, the liquid EC's are based on an annual dose of 50 mrem. Since a release concentration corresponding to a limiting dose rate of 500 mrem/year has been acceptable as a RETS limit for liquid effluents, it should not be necessary to reduce this limit by a factor of ten. (9) BV-1 and BV-2 has demonstrated that the use of the MPC's associated with the 10 CFR 20.106 has resulted in calculated maximum individual doses to a member of the public that are small percentages of the limits of 10 CFR 50 Appendix I. Therefore, the use of the OEC's, which correspond to an annual dose of 500 mrem (i.e.; 10 times the 10 CFR 20 EC's) should not have a negative impact on the ability to continue to operate within the limits of 10 CFR 50 Appendix I, and 40 CFR 190. (10) Operational flexibility is also necessary in establishing a basis for effluent monitor setpoint calculations. As previously discussed, the EC's stated in 10 CFR 20 relate to a dose of 50 mrem in a year. This is too restrictive to base effluent monitor setpoint calculations. For many liquid effluent release situations, the monitor background is high, which could result in a monitor setpoint that is approximately equal to the monitor background. (11) In summary, to accommodate operational flexibility needed for effluent releases, the limits associated with the liquid release concentration (i.e.; the OEC) are based on 10 times the EC's stated in the 10 CFR 20. The multiplier of 10 is used because the annual dose of 500 mrem (10 CFR 20 MPC bases) is a factor of 10 higher than the annual dose of 50 mrem (10 CFR 20 EC bases). Compliance with the 100 mrem dose limit of the 10 CFR 20.1302 will be demonstrated by operating</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 30 of 103

within the dose limits of 10 CFR 50 Appendix I, and 40 CFR 190 (which are also ODCM Controls for liquid and gaseous effluents). Implementation of the 10 CFR 20 for liquid effluents maintains the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

8.2.7.2 In summary, Per Generic Letter 89-01, the transfer of RETS procedural details fulfills the goal of the USNRC Policy Statement for Technical Specification improvements. It is not the USNRC's (or DLC's) intent to reduce the level of radioactive effluent control. Rather, the intent is to provide programmatic controls for RETS (as delineated in Technical Specification 6.8.6) and allow for relocation of the procedural details of the RETS to the ODCM.

8.2.8 Change (8) of BV-1 and 2 ODCM (Issue 3, Rev 1), Effective October, 1995

8.2.8.1 A description of the changes implemented with this revision are as follows:

8.2.8.1.1 Index: Editorial changes were made for clarity. (See justification 1)

8.2.8.1.2 Section 1.0: Revised Nb-95 and Nb-97 dose factors in Table 1.3-1 due to changing the niobium bioaccumulation factor. (see justification 2)

8.2.8.1.3 Appendix A: A change was made to Table 1.1 so that the letter A would proceed the table number. (See justification 1)

8.2.8.1.4 Appendix B: A descriptive paragraph was added at the front of this Appendix. Also, changes were made to the tables so that the letter B would proceed the table numbers. (See justification 1)

8.2.8.1.5 Appendix C: Descriptive paragraphs were added at the front of the Appendix (See justification 1). Removed the process flow rate operability and surveillance requirements for gaseous effluent radiation monitors [2RMQ-RQ301, 2RMQ-RQ303 and 2HVL-RQ112] from Tables 3.3-13 and 4.3-13 (See justification 3). Added alternate system effluent flow rate measuring devices for the three gaseous effluent pathways to Tables 3.3-13 and 4.3-13 (See justification 4). Revised Surveillance Requirements 4.11.1.1.3 and 4.11.1.1.4 and notes e and g of Table 4.11-1 to clarify Turbine Building sump sampling requirements (See justification 5).

8.2.8.1.6 Appendix D: Descriptive paragraphs were added at the front of the Appendix. (See justification 1)

8.2.8.1.7 Appendix E: Descriptive paragraphs were added at the front of the Appendix. (See justification 1)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 31 of 103
8.2.8.1.8	<p><u>Appendix F</u>: This is a new Appendix to the ODCM. It contains plant procedure references for Radiological Effluent Technical Specification (RETS) that were transferred from the Technical Specification Procedure Matrix. (See justification 1)</p>		
8.2.8.2	The justification used for change (8) to the ODCM are as follows:		
8.2.8.2.1	<p>These changes are considered editorial in nature. Therefore, these editorial changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also the editorial changes will not adversely impact the accuracy or reliability of effluent dose or setpoint calculation.</p>		
8.2.8.2.2	<p>This change resulted from revising the bioaccumulation factor (BF) for niobium from the value posted in Table A-1 of Regulatory Guide 1.109, Revision 1, 1977 (30,000 pCi/kg per pCi/l). Since this change in niobium BF (as documented and justified in Appendix A to Calculation Package No. ERS-ATL-83-027) merely removes the conservatism associated with organism uptake, then the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, removing the conservatism will not adversely impact the accuracy or reliability of effluent dose or setpoint calculation.</p>		
8.2.8.2.3	<p>This change removes the process flow rate operability and surveillance requirements for BV-2 Gaseous Effluent Radiation Monitors [2RMQ-RQ301, 2RMQ-RQ303 and 2HVL-RQ112] from Appendix C Tables 3.3-13 and 4.3-13. These items were removed from the ODCM by justification provided in Calculation Package No. ERS-ATL-90-021. A safety analysis and a no significant hazards evaluation were prepared and approved prior to submitted it to the NRC via TSCR No. 2A-61 in 1992. However, it was withdrawn in 1993 in an effort to alleviate any further delays associated with approval of TSCR No. 1A-175/2A-37 (Generic Letter 89-01 implementation). Removal of these requirements from the ODCM will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also removal of these items will not adversely impact the accuracy or reliability of effluent dose or setpoint calculation. The following is a summary of the justification. (1) BVPS-1 and BVPS-2 is currently using, and will continue to use design (maximum) system flow rates in ODCM Dose & Dose Rate Calculations, rather than those flow rates observed during normal plant operation. (2) BVPS-2 UFSAR Section 11.3.3 indicates that the source term for these three pathways are not significant. These pathways are not included in UFSAR Tables 11.3-1 through 11.3-4 that list the expected and design releases for each potentially radioactive pathway. (3) The DLC commitment to Regulatory Guide 1.97, Rev. 2 (Section 1.8-1 of the BVPS-2 UFSAR) is not affected. This RG</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 32 of 103	
<p>applies to instrumentation used during and after postulated accident conditions. These three process flow rate instruments were not used in any accident analysis, nor are they used to assess plant conditions during and following an accident. (4) The DLC commitment to Regulatory Guide 1.21, Rev. 1 (Section 1.8-1 of the BVPS-2 UFSAR) is not affected. RG 1.21, Section C.2 (Location of Monitoring) states in part: "All major and potentially significant paths for release of radioactive material during normal reactor operation, including anticipated operational occurrences, should be monitored. Measurements of effluent volume, rates of release, and specific radionuclides should be made insofar as practical . . ." As previously stated, the three process flow rate instruments are located on effluent pathways that do not have a significant source term. (5) BVPS-2 UFSAR Sections 9.4.13 and 9.4.16 indicate that the building ventilation system for these three pathways are non-safety related and are not required to perform any safety-related function. (6) There is no effect to the Noble Gas Monitors located on these three pathways. The Noble Gas Monitors are still capable of performing their intended functions as described in BVPS-2 UFSAR Section 11.5.2.4.</p>			
8.2.8.2.4	<p>This change adds alternate system effluent flowrate measuring devices for the three BV-1 gaseous effluent pathways to Appendix C Tables 3.3-13 and 4.3-13. A 10 CFR 50.59 safety evaluation has concluded that no unreviewed safety question is involved by adding the alternate measuring devices to Appendix C Tables 3.3-13 and 4.3-13. This conclusion is based on the following: (1) There is no increase in the probability or consequences of accidents or malfunctions of equipment important to safety. (2) There is no creation of a possibility for an accident or malfunction of a different type than any evaluated previously. (3) There is no reduction in the margin of safety. (4) Also, since this change merely adds alternate measuring devices that meet the same surveillance requirements of the primary channel, then the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, addition of the alternate flow rate measuring devices will not adversely impact the accuracy or reliability of effluent dose or setpoint calculations.</p>		
8.2.8.2.5	<p>This change to the ODCM clarifies Turbine Building sump sampling requirements and clarifies effluent related actions associated with detection of radioactivity in the secondary system. These clarifications are documented and justified in Calculation Package No. ERS-ATL-95-006. Also, since these clarifications were shown to meet the intent of NUREG-1301 (superseding NUREG-0472) and the BVPS-1 and 2 UFSAR's, then the clarification will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the clarifications will not adversely impact the accuracy or reliability of effluent dose or setpoint calculation. Also, a 10 CFR 50.59 safety evaluation has concluded that no</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 33 of 103

unreviewed safety question is involved by clarifying these actions. This conclusion is based on the following: (1) There is no increase in the probability or consequences of accidents or malfunctions of equipment important to safety. (2) There is no creation of a possibility for an accident or malfunction of a different type than any evaluated previously. (3) There is no reduction in the margin of safety.

8.2.9 Change (9) of BV-1 and 2 ODCM (Issue 3, Rev 2), Effective May 1997

8.2.9.1 A description of the changes implemented with this revision are as follows:

8.2.9.1.1 Index: Editorial changes were made for clarity. (See Justification 1)

8.2.9.1.2 Section 1.0: Clarifying statements were added to Tables 1.2-1a and 1.2-1b to show that the recirculation times listed are based on historical recirculation rates. Figure 1.4-3 was added to show BV-1 and 2 liquid Effluent Release Points. (See Justification 1)

8.2.9.1.3 Section 3.0: Removed the option to perform broad leaf vegetation sampling at the site boundary in a sector with the highest D/Q. (See Justification 2)

8.2.9.1.4 Appendix C: Added plant specific Mark Numbers to Tables 3.3-12, 4.3-12, 3.3-13 and 4.3-13 (See Justification 1). Corrected typographical errors on Surveillance Requirement 4.11.4.1.1 (See Justification 1). Added clarifying statements from NUREG-1301 and the Radiological Assessment Branch Technical Position to Tables 3.12-2 and 4.12-1 (See Justification 1). Removed the option to perform broad leaf vegetation sampling at the site boundary in a sector with the highest D/Q (See Justification 2).

8.2.9.1.5 Appendix E: Corrected typographical error on Table 6.9-1. (See Justification 1)

8.2.9.1.6 Appendix F: Added procedure details to Tables 11, 12 and 13. (See Justification 1)

8.2.9.2 The justification used for Change (9) to the ODCM are as follows:

8.2.9.2.1 These changes are considered editorial in nature. The changes either correct typographical errors or add editorial details from previously approved station documents. Therefore, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the editorial changes will not adversely impact the accuracy or reliability of effluent dose or setpoint calculations.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 34 of 103

8.2.9.2.2 This change removes the option to perform broad leaf vegetation sampling at the site boundary (in a sector with the highest D/Q) in lieu of the garden census. Per NUREG-1301 and the Radiological Branch Technical Position, this option does not apply to plants with elevated releases. Since BV-1 and 2 have elevated releases, the option should not be exercised. A review of past garden census showed that the option was never exercised at BV-1 and 2. Since this change removes an option that should not be exercised, then the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, removal of the option will not adversely impact the accuracy or reliability of effluent dose or setpoint calculations.

8.2.10 Change (10) of BV-1 and 2 ODCM (Issue 3, Rev 3), Effective June 1997

8.2.10.1 A description of the changes implemented with this revision are as follows:

8.2.10.1.1 Section 2.0: A release point for the BV-2 Turbine Building Vent was added (for editorial purposes) to Figure 2.4-2.

8.2.10.2 The justification used for Change (10) to the ODCM is as follows:

8.2.10.2.1 This change is considered editorial in nature. The change adds an equivalent item that was previously located on BV-2 Technical Specification Figure 5.1-2. Since BV-2 Technical Specification Amendment 83 removed this figure, then the gaseous release point for the BV-2 Turbine Building Vent needed transferred to the ODCM. Therefore, since this change is considered editorial, the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the editorial change will not adversely impact the accuracy or reliability of effluent dose or setpoint calculations.

8.2.11 Change (11) of BV-1 and 2 ODCM (Issue 3, Rev 4), Effective March 1998

8.2.11.1 A description of the changes implemented with this revision are as follows:

8.2.11.1.1 Index: Editorial changes were made for clarity.

8.2.11.1.2 Section 3.0: The distances for the environmental monitoring sample points were revised to show a more accurate measurement from the center of the Unit 1 Containment Building. The actual sample locations and descriptions remain unchanged. Also, the 4 individual quadrant maps showing TLD locations were consolidated into 1 map. This is a Corrective Action to Condition Report CR 980353.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 35 of 103
8.2.11.1.3	<p><u>Section 4.0</u>: Added clarifying statements as to how doses due to radioactive effluents for MEMBERS OF THE PUBLIC conducting activities inside the site boundary are derived and reported. This is a Corrective Action to Condition Report CR 971578.</p>		
8.2.11.1.4	<p><u>Appendix C</u>: Added statements to Action 23 of Table 3.3-12 to clarify that batch liquid releases may also be initiated with the same Action needed for resuming the release. This is a recommendation from the 1997 RETS Self-Assessment. A note was also added to this table to clarify that independent signatures on the discharge permit satisfy the requirement for "two technically qualified members of the Facility Staff independently verify the release rate calculation..." Added Action 29 to RM-1GW-108B on Table 3.3-13. This addition ensures consistency with the other 7 continuous gaseous effluent pathway Actions for Noble Gas Monitor inoperability. Added plant specific Mark Numbers for primary and alternate instrumentation to Tables 3.3-13 and 4.3-13 as follows: (1) For Noble Gas Activity Monitors, [RM-1VS-109 Channel 5] was added as an alternate to [RM-1VS-101B] and [RM-1V1S-110 Channel 5] was added as an alternate to [RM-1VS-107B]. [RM-1GW-109 Channel 5] was <u>not</u> added as an alternate to [RM-1GW-108B] at this time, because it does not perform on auto-isolation of gaseous waste decay tank release upon upper activity alarm. (2) For Particulate Activity Monitors, [RM-1VS-109 Channel 1] was added as an alternate to [RM-1VS-101A], [RM-1VS-1110 Channel 1] was added as an alternate to [RM-VS-1107A], and [RM-1GW-109 Channel 1] was added as an alternate to RM-1GW-108A.</p>		
8.2.11.1.5	<p><u>Appendix E</u>: Corrected typographical errors on Table E:6.9-1</p>		
8.2.11.1.6	<p><u>Appendix F</u>: Updated the procedure details for primary and alternate instrumentation included in Appendix C Tables 3.3-13 and 4.3-13. Reduced the amount of detail contained in reference to the Operating Manual L-5 logs so that the position of the surveillance on the logs can be changed without having a need to change the Tables in this Appendix. This is a Corrective Action to Condition Report CR 980129.</p>		
8.2.11.2	<p>The justification used for Change (11) to the ODCM is as follows:</p>		
8.2.11.2.1	<p>These changes are considered editorial in nature. The changes either correct typographical errors or add editorial details from previously approved station documents. Therefore, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the editorial changes will not adversely impact the accuracy or reliability of effluent dose or alarm setpoint calculations.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 36 of 103
8.2.12 <u>Change (12) of BV-1 and 2 ODCM (Issue 3, Rev 5), Effective November 1998</u>			
8.2.12.1 A description of the changes implemented with this revision are as follows.			
8.2.12.1.1	<u>Index</u> : Editorial changes were made for clarity. (See Justification 1.)		
8.2.12.1.2	<u>Section 1.0</u> : Added clarification for calculation of radionuclide concentration when the Post Dose Correction Factor is >1. (See Justification 1).		
8.2.12.1.3	<u>Section 3.0</u> : Added an additional site location for the upstream environmental surface water sample. Added additional method after collecting and compositing this sample. (See Justification 2.)		
8.2.12.1.4	<u>Appendix C</u> : Revised the definitions for MEMBER(S) OF THE PUBLIC and UNRESTRICTED AREA to ensure compliance with 10 CFR 20.1003. (See Justification 1.) Added a definition for MEMBER(S) OF THE PUBLIC to ensure compliance with 40 CFR 190.02(k). (See Justification 1.) Added plant specific Mark Numbers for primary and alternate instrumentation to Table 3.3-13 that were inadvertently omitted from change (11) to the ODCM. (See Justification 1.) Added clarification to Table 4.11-2 as to where and when H-3 samples of Waste Gas Storage Tanks are to be obtained. This is a Corrective Action to Condition Report CR 981489. (See Justification 1.) Added clarification to note "e" of Table 4.11-2 as to the appropriate ventilation release path. This is a Corrective Action to CR 981490. (See Justification 1.). Corrected an obvious omission on Table 3.12-1 to ensure that 2 TLD's are used for determination of Direct Radiation. (See Justification 1.) Incorporated the appropriate changes to Table 3.12-1 that are described above for Section 3.0. (See Justification 2.)		
8.2.12.1.5	<u>Appendix F</u> : Added procedure details from the Chemistry Manual to Table 6. This is a Corrective Action to Condition Report CR 981488. (See Justification 1.)		
8.2.12.2 The justifications used for Change (12) to the ODCM are as follows:			
8.2.12.2.1	These changes are considered editorial in nature. The changes either correct typographical errors or add editorial details from previously approved station documents. Therefore, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the editorial changes will not adversely impact the accuracy or reliability of effluent dose or alarm setpoint calculations.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 37 of 103
<p>8.2.12.2.2 These changes involve the upstream environmental surface water sample method and sample site. Since these changes were shown to meet the intent of NUREG-1301, and BVPS-1 and 2 UFSAR's, then the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the change will not adversely impact the accuracy or reliability of effluent dose or alarm setpoint calculations. Also, a 10 CFR 10.50 safety evaluation has concluded that no unreviewed safety question is involved by adding an additional sample site and sample method. This evaluation is based on the following: (1) There is no increase in the probability or consequences of accidents or malfunctions of equipment important to safety. (2) There is no creation of a possibility for an accident or malfunction of a different type than any evaluated previously. (3) There is no reduction in the margin of safety.</p> <p>8.2.13 <u>Change (13) of BV-1 and 2 ODCM (Issue 3, Rev 6), Effective May 1999</u></p> <p>8.2.13.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.13.1.1 <u>Index</u>: Editorial changes were made for clarity.</p> <p>8.2.13.1.2 <u>Section 3.0</u>: Updated figure number and table reference. Removed a redundant upstream environmental surface water sampling location.</p> <p>8.2.13.1.3 <u>Appendix C</u>: Made editorial changes for clarity. Added definitions for SHUTDOWN and STARTUP. Changed definition for ODCM to ensure agreement with definition provided in Unit 1/2 Technical Specification Amendments 220/97. Changed designations for primary and alternate instruments on Tables 3.3-12, 4.3-12, 3.3-13 and 4.3-13 from "P" and "A" to "Pri" and "Alt". Clarified use of the Flow Rate Measurement Devices for the Cooling Tower Blowdown Line on Tables 3.3-12 and 4.3-12 to show that the Unit 1/2 combined instrument [FT-1CW-101-1] is the primary and both of the individual Unit 1 and Unit 2 instruments [FT-1CW-101] and [2CWS-FT101] are the alternates. Updated Actions 24, 25 and 26 of Table 3.3-12 to describe use of comparable alternate monitoring channels when the primary channels are INOPERABLE. Clarified Table 3.3-13 Action 28 applicability for Unit 2 gaseous effluent monitors. Clarified Table 3.3-13 Action 30 to show that applicability is for batch purges of the reactor containments. Changed reference of Special Report compliance requirement from Technical Specification 6.9.2f to 10 CFR 20.2203 and 10 CFR 50.4 as permitted by Unit 1/2 Technical Specification Amendments 220/97. Clarified note b of Table 4.11-2 regarding sampling and surveillances frequencies. Clarified Controls 3.12.1 and 3.12.2 to ensure compliance with NUREG-1301.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 38 of 103
<p>8.2.13.1.4 <u>Appendix E</u>: Made editorial changes for clarity. Changed reference of Special Report compliance requirement from Technical Specification 6.9.2f to 10 CFR 20.2203 and 10 CFR 50.4 as permitted by Unit 1/2 Technical Specification Amendments 220/97. Changed submittal date of annual REMP report from May 1 to May 15 as permitted by Unit 1/2 Technical Specification Amendments 220/97. Changed column heading in Table E: 6.9-1 to ensure consistency with NUREG-1301.</p> <p>8.2.13.2 The justification used for change (13) to the ODCM is as follows:</p> <p>8.2.13.2.1 All changes are considered editorial in nature. The changes either clarify the intent of the original specification or add equivalent items form the standard guidance document (NUREG-1301) or recent Technical Specification Amendments. Therefore, since these changes are considered editorial, the changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a and Appendix I to 10 CFR 50. Also, the editorial changes will not adversely impact the accuracy or reliability of effluent dose or setpoint calculations.</p> <p>8.2.14 <u>Change (14) of BV-1 and 2 ODCM (Rev 14), Effective March 2000</u></p> <p>8.2.14.1 Prior to this ODCM change, the change numbers did not match the Issue and Revision numbers. For example, the last implemented ODCM change was (13), but carried an Issue 3, Revision 6 designation. Therefore, as of this ODCM change (14), consecutive Revision numbers will begin with Revision 14.</p> <p>8.2.14.2 A description of the changes implemented with this revision are as follows:</p> <p>8.2.14.2.1 <u>Index</u>: Editorial changes were made for clarity. References to condition reports CR 982097, CR 992652 and CR 993021 were added.</p> <p>8.2.14.2.2 <u>Appendix C</u>: Editorial changes were made for clarity. Corrected a typographical error on Table 3.3-12 in regards to FT-CW-101-1. Changed the grab sampling requirement from 8 hours to 12 hours for Table 3.3-12 Action 24 (NUREG-1301, Table 3.3-12, Action 36 and 37 allow this change). Enhanced the Channel Functional Test requirements on Table 4.3-12 from Q(6) to Q(1) for RM-1DA-100 (Corrective Action to Condition Report CR 993021). Add clarification to Table 3.3-13 and 4.3-13 to show the plant specific Mark Numbers for the primary and alternate BV-1 Sample Flow Rate Measuring Devices. Corrected a typographical error on Table 3.3-13 Action 27. Separated Action 28 of Table 3.3-13 into individual Action 28 requirements for System Effluent Flow Rate Measuring Devices/Process Flowrate Monitors and individual Action 28 requirements for Sample Flow Rate Measuring Devices/Sample Flowrate Monitors. Added clarification to Table 3.3-13 to show that Action 29 and Action 32 are applicable for continuous releases. Added an alternate method in lieu of grab sample collection (i.e., local monitor readings can be obtained when</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 39 of 103

communication is lost to the Control Room) to show compliance to Table 3.3-13 Action 29. Changed the grab sampling requirement from 8 hours to 12 hours for Table 3.3-13 Action 29 and Action 32 (NUREG-1301, Table 3.3-013, Action 47 allows this change). Corrected typographical errors on Table 4.11-1 in regards to liquid composite analysis frequency and table notation.

8.2.14.2.3 Appendix F: Made editorial changes for clarity. Updated the procedure details for primary and alternate instrumentation included in Appendix C Tables 3.3-13 and 4.3-13. Added appropriate references to the HP Shift Logs (i.e., HPM Appendix 1) when these logs are used satisfy ODCM Appendix C Surveillances and Actions (Corrective Action to Condition Report CR 992652).

8.2.14.3 The justification used for change (14) to the ODCM is as follows:

8.2.14.3.1 Most of these changes are considered editorial in nature. All changes were screened for 10CFR50.59 applicability. In summary, the BVPS-1 and 2 UFSAR's are not impacted, because the changes either clarify the intent of the original specification, add plant specific Mark Numbers, or add equivalent items from the standard guidance document (NUREG-1301). Therefore, these changes will maintain the level of radioactive effluent control required by 10CFR20.1302, 40CFR Part 190, 10 CFR50.36a, and Appendix I to 10CFR50. Also, these changes will not adversely impact the accuracy or reliability of effluent dose or alarm setpoint calculations.

8.2.15 Change (15) of BV-1 and 2 ODCM (Rev 15), Effective August 2000

8.2.15.1 A description of the changes implemented with this revision are as follows:

8.2.15.1.1 Index: Editorial changes were made for clarity. Reference to Condition Report CR 001682 was added. Reference to NRC unresolved Item 83-30-05 was added.

8.2.15.1.2 Appendix C: Editorial changes were made for clarity. Annotated Actions 28 of Table 3.3-13 into Action 28A and 28B to show differentiation between Action 28A requirements for system/process flow rate measurement and Action 28B requirements for sampler flow rate measurement. Added an alternate method in lieu of 4 hour flow rate estimations (i.e.; assume ODCM design values for system/process flow rate) to show compliance with Table 3.3-13 Action 28A when the system/process flow rate monitor is inoperable. Annotated Actions 30 of Table 3.3-13 into Action 30A and 30B to show differentiation between Action 30A requirements for BV-1 reactor containment purges and Action 30B requirements for BV-2 reactor containment purges.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 40 of 103

8.2.15.2 The justification used for change (15) to the ODCM is as follows:

8.2.15.2.1 Some of these changes are considered editorial in nature. These changes were screened for 10CFR50.59 applicability and determined not to impact the BVPS-1 and 2 UFSAR's. Since the editorial changes clarify the intent of the original specification, then these changes will maintain the level of radioactive effluent control required by 10CFR20.1302, 40CFR Part 190, 10CFR50.36a, and Appendix I to 10CFR50. Also, these changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.

8.2.15.2.2 The change to allow use of design (maximum) system flow rates in lieu of 4 hour flow rate estimations (for five of the eight gaseous effluent release pathways) was screened for 10CFR50.59 applicability and determined not to impact the BVPS-1 and 2 UFSAR's. The 4 hour flow rate estimations for these effluent release pathways have never been used in ODCM Dose and Dose Rate Calculations. The method for use of process flow rates in ODCM Dose and Dose Rate Calculations remains unchanged. For example, BVPS-1 and BVPS-2 is currently using, and will continue to use design (maximum) system flow rates in ODCM Dose and Dose Rate Calculations for all eight gaseous effluent release pathways. This is necessary to ensure that DLC response to NRC Unresolved Item 50-334/83-30-05 is not compromised. Also this change is considered similar and within the justification provided for ODCM change (8) that removed all of the process flow rate operability and surveillance requirements for the other three gaseous effluent release pathways. Based on the above, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, these changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.

8.2.16 Change (16) of BV-1 and 2 ODCM (Effective April 2002)

8.2.16.1 A description of the changes implemented with this revision are as follows:

8.2.16.1.1 The entire BV-1 and 2 ODCM was converted to the ODC format as delineated in 1/2-ADM-0100. As part of this process, the ODCM was separated into eight procedures as follows:

8.2.16.1.1.1 1/2-ODC-1.01, Rev 0; ODCM: Index, Matrix and History of ODCM Changes (formerly; ODCM Index and Appendix F)

8.2.16.1.1.2 1/2-ODC-2.01, Rev 0; ODCM: Liquid Effluents (formerly; ODCM Section 1 and 5)

8.2.16.1.1.3 1/2-ODC-2.02, Rev 0; ODCM: Gaseous Effluents (formerly; ODCM Section 2 and 5)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 41 of 103
8.2.16.1.1.4	<u>1/2-ODC-2.03, Rev 0</u> ; ODCM: Radiological Environmental Monitoring Program (formerly; ODCM Section 3)		
8.2.16.1.1.5	<u>1/2-ODC-2.04, Rev 0</u> ; ODCM: Information Related to 40 CFR 190 (formerly; ODCM Section 4)		
8.2.16.1.1.6	<u>1/2-ODC-3.01, Rev 0</u> ; ODCM: Dispersion Calculational Procedure and Source Term Inputs (formerly; ODCM Appendix A & B)		
8.2.16.1.1.7	<u>1/2-ODC-3.02, Rev 0</u> ; ODCM: Bases for ODCM Controls (formerly; ODCM Appendix D)		
8.2.16.1.1.8	<u>1/2-ODC-3.03, Rev 0</u> ; ODCM: Controls for RETS and REMP Programs (formerly; ODCM Appendix C and E)		
8.2.16.1.2	<u>Procedure 1/2-ODC-3.02, Rev 0</u> : Technical Specification Bases 3/4.3.3.1 was duplicated in the Bases for ODCM Controls as permitted by Unit 1/2 Technical Specification Amendments 1A-246/2A-124. ^(3.2.6.8)		
8.2.16.1.3	<u>Procedure 1/2-ODC-3.03, Rev 0</u> : Portions of Technical Specification LCO 3.3.3.1 (including portions of Tables 3.3-6 and 4.3-3) were transferred to the ODCM Controls as permitted by Unit 1/2 Technical Specification Amendments 1A-246/2A-124. ^(3.2.6.8) Specifically, this includes the Mid and High Range Channels of Noble Gas Effluent Monitors [RM-1VS-109 (7 and 9), RM-1VS-110 (7 and 9), RM-1GW-109 (7 and 9), and 2HVS-RQ109C and 109D], the Atmospheric Steam Dump Valve/Code Safety Relief Valve Discharge Monitors [RM-1MS-100A, B and C] and Auxiliary Feedwater Pump Turbine Exhaust Monitor [RM-1MS-101]. The Preplanned Method of Monitoring (PMM) was also added for clarification of necessary actions when the primary instrument is inoperable. Addition of the PMM's are considered an editorial change because it merely specifies the asset number (or appropriate form number), which were included as PMM's in previously approved station documents.		
8.2.16.1.4	<u>Procedure 1/2-ODC-3.03, Rev 0</u> : Added clarifications to ODCM Control 3.3.3.9 Table 3.3-13 to show that Action 30A and Action 3B are applicable to the initial batch purge of the reactor containment atmosphere. All other releases of reactor containment atmosphere (i.e.; after the initial batch purge) are considered continuous releases.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 42 of 103
8.2.16.1.5	<p><u>Procedure 1/2-ODC-3.03, Rev 0:</u> Added specific plant asset numbers to ODCM Control 3.3.3.10 Table 3.3-13 and Table 4.3-13 to show that Sample Flow Rate Monitor flow transmitters [2HVS-FIT101-1, 2RMQ-FIT301-1, 2HVL-FIT112-1 and 2RMQFIT303-1] may be used as comparable alternates when the primary instruments [RM-11 Monitor Item 28 for 2HVS-RQ101, 2RMQ-RQ301, 2HVL-RQ112 and 2RMQ-RQ303], respectively, are INOPERABLE. This is considered an editorial change because the primary monitoring channel (i.e.; RM-11 Monitor Item 28) display already receives its input from these same flow transmitters.</p>		
8.2.16.1.6	<p><u>Procedure 1/2-ODC-3.03, Rev 0:</u> Added notation to ODCM Control 3.3.3.10 Table 3.3-13 and Table 4.3-13 to show that [RM-1GW-109 Channel 5] may be used as a comparable alternate to [RM-1GW-108B] for continuous releases. However, since [RM-1GW-109 Channel 5] cannot perform an automatic isolation of gaseous waste decay or storage tank releases, then notation was also added to prevent using this monitor as a comparable alternate for batch releases. This is considered an editorial change because it merely specifies the asset number of a redundant alternate monitoring channel that was included in previously approved station documents.</p>		
8.2.16.1.7	<p><u>Procedure 1/2-ODC-3.03, Rev 0:</u> Replaced the requirements for "Particulate Activity Monitors" in ODCM Control 3.3.3.10 Tables 3.3-13 and Table 4.3-13 with requirements for "Particulate and Iodine Samplers". This is considered an editorial change because the NRC guidance document used for preparation of ODCM Controls (NUREG-1301) contains the clarification that the requirements listed in these Tables are for the "Particulate and Iodine Samplers", and not for the "Particulate Activity Monitors".</p>		
8.2.16.2	The justification used for change (16) to the ODCM is as follows:		
8.2.16.2.1	<p>The specific radiation monitoring channels transferred to the ODCM provide alarms and indications to alert plant personnel of high radiation conditions and to assist in evaluating and trending plant effluents. The Actions applicable if the monitors are inoperable require only that area surveys be performed on a daily basis, or that explanations of inoperability be provided in an annual effluent report. The Actions do not impact or reference the operability of other systems nor do the Actions require that plant operation be terminated at any time.</p>		
8.2.16.2.2	<p>Some of the radiation monitoring effluent monitors transferred to the ODCM provide indications used to assess selected plant parameters following an accident consistent with the recommendations of NUREG-0737. However, the monitors do not provide indication for post accident variables that have been identified as Regulatory Guide 1.97 Type A or Category I.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 43 of 103

8.2.16.2.3 The Safety Analysis performed for the License Amendments conclude that the radiating monitoring channels transferred to the ODCM do not reduce the effectiveness of the requirements being relocated. Rather, the transferred results in a change in the regulatory control required for future changes made to the requirements. The requirements will continue to be implemented by the appropriate plant procedures in the same manner as before. However, future changes to the transferred requirements will be controlled in accordance with 10 CFR 50.59 instead of requiring a license amendment per 10 CFR 50.90.

8.2.16.2.4 Based on the above, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, these changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.

8.2.17 Change (17) of BV-1 and 2 ODCM (Effective August 2002)

8.2.17.1 A description of the changes implemented with this revision are as follows:

8.2.17.1.1 Procedure 1/2-ODC-3.03, Rev 1: Technical Specification LCO 3.11.1.4 for Liquid Storage Tank Activity Limits, and LCO 3.11.2.5, for Gas Storage Tank Activity Limits were transferred to ODCM Controls 3.11.1.4 and 3.11.2.5 respectively as permitted by Unit 1/2 Technical Specification Amendments 1A- 250/2A-130.^(3.2.6.9)

8.2.17.1.1.1 As part of the preparation work for transfer of the Liquid Storage Tank Activity Limits to the ODCM, the 10 Curie Limit for these tanks was re-verified and documented in Calculation Package ERS-ATL-95-007.^(3.2.3.9) The results of this calculation provide tank specific activity limits to ensure that the 10 CFR 20 Appendix B Table 2, Col. 2 EC Limits will be maintained should an accidental release of the tank(s) contents occur. Previously, LCO 3.11.1.4 used a generic limit of 10 Curies for each of the four tanks listed. However, formal documentation for derivation of the 10 Curie value could not be located in the records storage system.

8.2.17.1.1.2 In addition, individual tank Activity limits were developed for the Unit 1 and 2 Refueling Water Storage Tanks (RWST's), which were also added to this ODCM Control. The Surveillance Requirements for determination of RWST Activity will not be performed once per 7 days like the other Liquid Storage Tanks, because radioactive material is not added to the RWST's on a weekly basis. Therefore, the surveillance for determination of (RWST's) Activity will be performed within 7 days of returning reactor cavity water (radioactive material) back to the RWST (i.e.; during a refueling outage).

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 44 of 103
8.2.17.1.2	<u>Procedure 1/2-ODC-3.03, Rev 1</u> : Changed the due date of the Annual Radioactive Effluent Release Report from April 1 to May 1 as permitted by Unit 1/2 Technical Specification Amendments 1A-250/2A-130. ^(3.2.6.9)		
8.2.17.1.3	<u>Procedure 1/2-ODC-3.03, Rev 1</u> : Changed Table 3.3-12 of Control 3.3.3.9 to correct an obvious omission of Channel Operability and Action Statement Requirements for Flow Rate Measurement Device [FR-1LW-103] on the Liquid Waste Containment Drain Line. This obvious omission is detailed in CR 02-05533. ^(3.2.2.12)		
8.2.17.1.4	<u>Procedure 1/2-ODC-3.03, Rev 1</u> : Made editorial changes to correct the primary asset numbers of the BVPS-2 Sample Flowrate Monitors as shown on Tables 3.3-13 and 4.3-13 of Control 3.3.3.10. These changes clarify that the primary Sampler Flowrate Monitor is the device that is used for monitoring sample flowrate through the Particulate and Iodine Sampler Flowpath, not the Particulate and Iodine Monitoring Flowpath.		
8.2.17.2	The justification used for change (17) of the ODCM is as follows:		
8.2.17.2.1	These changes merely transfers existing storage tank activity limits from the Technical Specification to the ODCM and changes the due date for the Annual Radioactive Effluent Release Report as permitted by Unit 1/2 Technical Specification Amendments 1A-250/2A-130. As part of this change, the ODCM Control for Liquid Storage Tank Activity Limits was enhanced to add ODCM Controls and Surveillance Requirements for the Unit 1 and Unit 2 RWST's. Therefore, these changes (as delineated in the Technical Specification Amendments) will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, these changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.		
8.2.18	<u>Change (18) of the BV-1 and 2 ODCM (Effective October 2002)</u>		
8.2.18.1	A description of the changes implemented with this revision are as follows:		
8.2.18.1.1	<u>Procedure 1/2-ODC-3.03, Rev 2</u> : Added requirement for applicable station groups notification of pending ODCM changes as described in CR 09-05711. ^(3.2.2.13)		
8.2.18.2	The justification used for change (18) of the ODCM is as follows:		
8.2.18.2.1	This change is considered editorial in nature, which exempts the change from Regulatory Applicability Determination. Therefore, this change will not impact the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 45 of 103

8.2.19 Change (19) of BV-1 and 2 ODCM (Effective November 2002)

8.2.19.1 A description of the changes implemented with this revision are as follows:

8.2.19.1.1 Procedure 1/2-ODC-2.01, Rev 1: Changed Table 1.1-1a and 1.1-1b to add Zn-65 to the respective BV-1 and 2 Liquid Source Term as described in CR 02-06174 (CA-01, CA-13 and CA-14). For information, zinc may be added to the reactor coolant system in an effort to reduce general corrosion of primary system materials and mitigation of stress corrosion cracking. Added benefits to zinc addition involve preferential release of nickel and cobalt which, in-turn, reduces plant dose rates. Development of the specific Zn-65 Annual Release Activity is delineated in Calculation Package No. ERS-ATL-83-027.^(3.2.3.1) Addition of Zn-65 to the source terms also caused changes in the Liquid Effluent Monitor Alarm Setpoints, and appropriate monitor conversion factors.

8.2.19.1.2 Procedure 1/2-ODC-2.01, Rev 1: Table 1.1-1a was changed to update the remainder of the source term with annual release values derived in Stone and Webster Calculation Package No. UR(B)-160.^(3.2.3.10)

8.2.19.1.3 Procedure 1/2-ODC-2.01, Rev 1: Editorial changes were made to this procedure for update of ODCM references and to add discussion of why Liquid Waste Evaporators are no longer used at BV-1 and 2 to process liquid waste.

8.2.19.2 The justification used for change (19) of the ODCM is as follows:

8.2.19.2.1 Addition of Zn-65 to the BV-1 and 2 Liquid Source Terms, along with update of the BV-1 and 2 Liquid Source Term is considered a procedure correction, and is enveloped by the Regulatory Applicability Determination performed for BV-1 ECP-02-0410. Based on the above, these changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, these changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.

8.2.20 Change (20) of BV-1 and 2 ODCM (Effective October 2003)

8.2.20.1 A description of the changes implemented with this revision are as follows:

8.2.20.1.1 Procedure 1/2-ODC-2.01, Rev 2: Changed LW System diagrams (Attachment D) to indicate the flow path for cross connect of LW between Unit 1 and Unit 2.

8.2.20.1.2 Procedure 1/2-ODC-2.02, Rev 1: Changed Table 2.1-1 to revise the source term for the Unit 1 Containment Vacuum Pumps as described in CR03-04830 (CA-03).

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 46 of 103
8.2.20.1.3	<p><u>Procedure 1/2-ODC-3.03, Rev 3:</u> Changed the Preplanned Method of Monitoring (PMM) in Attachment D Table 3.3-6 and Table 4.3-3. Specifically, the 2nd PMM for the Reactor Building/SLCRS Mid & High Range Noble Gas Monitors (RM-1VS-110 Ch 7 & Ch 9) was changed FROM "(RM-1VS-107B)" TO "(RM-1VS-107B, or RM-1VS-110 Ch 5)". Also, the 2nd PMM for the Auxiliary Building Ventilation System Mid & High Range Noble Gas Monitors (RM-1VS-109 Ch 7 & Ch 9) was changed FROM "(RM-1VS-101B)" TO "(RM-1VS-101B, or RM-1VS-109 Ch 5)". Similarly, the 2nd PMM for the Gaseous Waste/ Process Vent System Mid & High Range Noble Gas Monitors (RM-1GW-109 Ch 7 & Ch 9) was changed FROM "(RM-1GW-108B)" TO "(RM-1GW-108B, or RM-1GW-109 Ch 5)".</p>		
8.2.20.1.4	<p><u>Procedure 1/2-ODC-3.03, Rev 3:</u> Changed Attachment J Control 3.11.1.4 to update the activity limits for the liquid storage tanks to the values specified in Calculation Package No. ERS-ATL-95-007.</p>		
8.2.20.1.5	<p><u>Procedure 1/2-ODC-3.03, Rev 3:</u> Changed Attachment K Table 4.11-2 to add more specific guidance for sampling of Gaseous Effluent Pathways. Specifically, this table is generic for Unit 1 & Unit 2 Gaseous Effluent Pathways, but sampling may only need required at some of the Gaseous Effluent Pathways rather than all of the Gaseous Effluent Pathways (as could be inferred from the wording in the Table Notation). Therefore to prevent unnecessary sampling, applicability statements were added to this table to delineate which ventilation systems are affected by the note(s). Also, note (f) includes a clarification of how compliance to this requirement is achieved per response to NRC Unresolved Item 50-334/83-30-05.</p>		
8.2.20.2	The justifications used for change (20) of the ODCM are as follows:		
8.2.20.2.1	<p><u>Procedure 1/2-ODC-2.01, Rev 2:</u> Changing the diagram to show the LW cross connect between Unit 1 and Unit 2 is not a change to plant configuration, and is considered a procedure correction. Specifically, this procedure of the ODCM already describes the shared radwaste treatments system. Also, the UFSAR's describe the cross connect. Based on the above, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 47 of 103
8.2.20.2.2	<p><u>Procedure 1/2-ODC-2.02, Rev 1:</u> The original source-term calculation for the GW System was based on an operating flow rate of 5 scfm for the Unit 1 containment vacuum pumps. The flow rate for the new pumps is 70 scfm. Consequently, the source-term was revised per Calculation Package ERS-HHM-87-014 and then transcribed to this procedure. Although the new pumps represent a factor of 15 increase in flow rate, the gaseous effluent monitor alarm setpoints are unchanged. Specifically, the previous setpoints were based on a percentage of Offsite Dose Rate Limits, and those values were actually above the range of the instruments, so an on-scale value was substituted. This is also true for the re-calculated setpoints, so the same on-scale values are used. In summary, changing the source term is considered a procedure correction, and is enveloped by the Regulatory Applicability Determination performed for BV-1 ECP-02-0079. Based on the above, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. . This procedure change implements a Corrective Action per CR03-04830-03.</p>		
8.2.20.2.3	<p><u>Procedure 1/2-ODC-3.03, Rev 3:</u> Changing the Preplanned Method of Monitoring (PMM) will prevent unnecessary grab sampling (i.e.; the 3rd PMM) when the primary channel for the Mid or High Range Noble Gas Monitor is inoperable. Specifically, IF other Noble Gas Monitoring channels are available on that effluent pathway, THEN monitoring should be assumed with those channels as the 2nd PMM. In summary, the 3rd PMM (i.e.; obtaining grab gas samples every 12 hours) should only be performed as a last resort to a complete lack of continuous noble gas monitoring channels being available on that effluent pathway. Based on the above, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. . This procedure change implements a Corrective Action per CR03-06123-01.</p>		
8.2.20.2.4	<p><u>Procedure 1/2-ODC-3.03, Rev 3:</u> Changing the activity limits for liquid storage tanks does not affect original plant accident analyses. Specifically, the original analyses were performed in accordance with NUREG-0800 SRP 15.7.3 using the best available data at that time. The updated analyses were also performed in accordance the same NUREG, but current (more accurate) data was used to determine allowable activity content in each tank. Based on the above, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR 03-07487-05.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 48 of 103

8.2.20.2.5 Procedure 1/2-ODC-3.03, Rev 3: Changing Attachment K Table 4.11-2 to add more specific guidance for sampling of Gaseous Effluent Pathways is considered a simple change. Specifically, this change merely prevents unnecessary sampling of unaffected ventilation pathways. Based on the above, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR 03-06281-01.

8.2.21 Change (21) of BV-1 and 2 ODCM (Effective November 2004)

8.2.21.1 A description of the changes implemented with this revision are as follows:

8.2.21.1.1 Procedure 1/2-ODC-1.01, Rev 4, Procedure 1/2-ODC-2.01, Rev 3 and Procedure 1/2-ODC-3.03, Rev 4: Changed ownership of procedures from the Radiation Protection Section to the Nuclear Environmental & Chemistry Section per CR 05-01169-14, CR 05-01169-15 and CR 05-01169-21.

8.2.21.1.2 Procedure 1/2-ODC-2.01, Rev 3: Changed Attachment D to correct the volume of Liquid Waste Drain Tanks (2LWS-TK21A/21B) from 7,500 gal/tank to 10,000 gal/tank.

8.2.21.1.3 Procedure 1/2-ODC-3.03, Rev 4: Changed Attachment C to implement the increased flexibility in Mode restraints that is described in LAR 1A-321/2A 193 and CR 03-09288-19.

8.2.21.1.4 Procedure 1/2-ODC-3.03, Rev 4: Corrected a typographical error in Attachment O, Control 3.11.2.5 per CR03-11726-01. Specifically, the final word in Action (a) was changed from “nad” to “and”.

8.2.21.1.5 Procedure 1/2-ODC-3.03, Rev 4: Revised Attachment F, (Table 3.3-13 and 4.3-13) to correct a typographical error per CR04-01643-01. Specifically, the Asset Number for the Vacuum Gauge used for measurement of sample flow (from the Alternate Sampling Device) was changed from [PI-1GW-13] to [PI-1GW-135].

8.2.21.1.6 Procedure 1/2-ODC-3.03, Rev 4: Revised Attachment F, (Table 3.3-13 and 4.3-13) per CR04-02275-01. Specifically, clarification was provided to indicate that the “Sampler Flow Rate Monitors are the devices used for “Particulate and Iodine Sampling”.

8.2.21.1.7 Procedure 1/2-ODC-3.03, Rev 4: Revised Attachment J, Control 3.11.1.4, ACTION a, to add clarification that requires specific calculation of 10 CFR Part 20 EC’s when the individual tank limits are exceeded.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 49 of 103

8.2.21.2 The justifications used for change (21) of the ODCM are as follows:

8.2.21.2.1 Procedure 1/2-ODC-1.01, Rev 4, Procedure 1/2-ODC-2.01, Rev 3 and Procedure 1/2-ODC-3.03, Rev 4: Changing ownership of these procedures from Radiation Protection to Nuclear Environmental & Chemistry is considered a procedure correction. SINCE the changes merely transfers RETS, REMP and ODCM responsibilities to a different manager, THEN the changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the changes will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. The procedure changes implement Corrective Actions per CR 05-01169-14, CR 05-01169-15, and CR 05-01169-21.

8.2.21.2.2 Procedure 1/2-ODC-2.01, Rev 3: Changing the volume of the Unit 2 Liquid Waste Tank is considered a procedure correction.. SINCE this was a typographical error on the Attachment, THEN it does not impact the actual tank volume that is used in effluent release calculations and offsite dose determinations. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.

8.2.21.2.3 Procedure 1/2-ODC-3.03, Rev 4: Changing Attachment C to implement the increased flexibility in Mode restraints (described in LAR 1A-321/2A-193) is considered a simple change. SINCE the change implements guidance provided in the Technical Specifications, THEN the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR 03-09288-19.

8.2.21.2.4 Procedure 1/2-ODC-3.03, Rev 4: The typographical error in Attachment O, Control 3.11.2.5 is considered a procedure correction. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR 03-11726-01.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 50 of 103
8.2.21.2.5	<p><u>Procedure 1/2-ODC-3.03, Rev 4:</u> Correcting the typographical error in Attachment F, (Table 3.3-13 and 4.3-13) is considered a procedure correction. <u>SINCE</u> this change merely corrects an obvious error, <u>THEN</u> this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR04-01643-01.</p>		
8.2.21.2.6	<p><u>Procedure 1/2-ODC-3.03, Rev 4:</u> Providing clarification for the Sampler Flow Rate Monitors is considered a simple change, because it was possible to misinterpret which filter paper sampler (e.g.; moving filter or fixed filter) the specification was referring to. <u>SINCE</u> no changes were made to actual samplers used for effluent release calculations or offsite dose determinations, <u>THEN</u> this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This procedure change implements a Corrective Action per CR04-02275-01.</p>		
8.2.21.2.7	<p><u>Procedure 1/2-ODC-3.03, Rev 4:</u> Providing clarification that requires calculation of 10 CFR Part 20 EC's (when the individual tank limits are exceeded) is considered a simple change. Specifically, the individual tank limits were derived from an assumed source-term and may not be representative of the actual source term at time of sample. This clarification also ensures that a "Special Report" is submitted only when the 10 CFR Part 20 EC limits are actually exceeded (i.e.; when calculated using actual sample analysis) at the nearest surface water supply and the nearest potable water supply in the unrestricted area. Per Calculation Package No. ERS-ATL-95-007 ^(3.2.3.9), the nearest surface water supply and the nearest potable water supply are considered to be the entrance to the Midland Water Treatment Facility. <u>SINCE</u> no changes were made to the bases for the tank activity limits, <u>THEN</u> this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, this change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 51 of 103

8.2.22 Change (22) of BV-1 and 2 ODCM (Effective August 2006)

8.2.22.1 A description of the changes implemented with this revision are as follows:

8.2.22.1.1 Procedure 1/2-ODC-2.01, Rev 4: Incorporated Improved Technical Specification Reference changes from T.S. 6.8.6 to T.S. 5.5.2, per CR 05-03306. Revised the alarm setpoints of [RM-1RM-100] and [RM-1DA-100] via vendor calculation Package No. 8700-UR(B)-223. These changes reflect the Extended Power Uprate (EPU) at Unit 1 per ECP-04-0440, Unit 1 TS Amendment No. 275 and CR 06-04908-03. Updated the figure of Liquid Effluent Release Points (Attachment D, Figure 1.4-3) to incorporate a modified version of Plant Drawing No. 8700-RM-27F per CR 05-03854-01.

8.2.22.1.2 Procedure 1/2-ODC-2.02, Rev 2: Changed ownership of procedure from the Radiation Protection Section to the Nuclear Environmental & Chemistry Section per CR 05-01169-16. Incorporated a " \leq " designation for all low range noble gas effluent monitor alarm setpoints to meet the provisions of vendor calculation Package No. 8700-UR(B)-223. These changes reflect the Extended Power Uprate (EPU) at Unit 1 per ECP-04-0440, Unit 1 TS Amendment No. 275 and CR 06-04908-04.

8.2.22.1.3 Procedure 1/2-ODC-3.03, Rev 5: Revised the alarm setpoints of the mid range and high range noble gas effluent monitors via vendor calculation Package No. 8700-UR(B)-223. These changes reflect the Extended Power Uprate (EPU) at Unit 1 per ECP-04-0440, Unit 1 TS Amendment No. 275 and CR 06-04908-03.

8.2.22.2 The justifications used for change (22) of the ODCM are as follows:

8.2.22.2.1 Procedure 1/2-ODC-2.01, Rev 4: Updating the alarm setpoints and the figure of liquid effluent release points are considered procedure corrections, because they merely update the ODCM to agree with previously approved documents that were implemented with TS Amendments. SINCE the change merely updates the ODCM, THEN the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. SINCE PORC review & acceptance is required per TS 6.14 and 1/2-ADM-1640, THEN the review is considered complete per Regulatory Applicability Determination RAD-06-03831, RAD-06-01658 and RAD-06-05070. As previously noted, these procedure changes implement Corrective Actions per CR 06-04908-03, and CR 05-03854-01.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 52 of 103
8.2.22.2.2	<p><u>Procedure 1/2-ODC-2.02, Rev 2</u>: Changing the ownership of the procedure and updating the alarm setpoints with a “≤” designation are considered procedure corrections, because they merely update the ODCM to agree with previously approved documents that were implemented with TS Amendments. <u>SINCE</u> the change merely updates the ODCM, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. <u>SINCE</u> PORC review & acceptance is required per TS 6.14 & 1/2-ADM-1640, <u>THEN</u> the review is considered complete per Regulatory Applicability Determination RAD-06-03831 and RAD-06-01658. As previously noted, these procedure changes implement Corrective Actions per CR 05-01169-16 and CR 06-04908-04.</p>		
8.2.22.2.3	<p><u>Procedure 1/2-ODC-3.03, Rev 5</u>: Updating the alarm setpoints is considered a procedure correction, because this merely updates the ODCM to agree with previously approved documents that were implemented with TS Amendments. <u>SINCE</u> the change merely updates the ODCM, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. <u>SINCE</u> PORC review & acceptance is required per TS 6.14 & 1/2-ADM-1640, <u>THEN</u> the review is considered complete per Regulatory Applicability Determination RAD-06-03831 and RAD-06-01658. As previously noted, these procedure changes implement Corrective Actions per CR 06-04908-03.</p>		
8.2.23	<u>Change (23) of BV-1 and 2 ODCM (Effective December 2006)</u>		
8.2.23.1	A description of the changes implemented with this revision are as follows:		
8.2.23.1.1	<p><u>Procedure 1/2-ODC-1.01, Rev 5</u>: Changed Attachment C, Table F: 3a of the procedure matrix to add Form 1/2-ENV-01.04.F01 as documentation for performing a Channel Functional Test of the Unit 1 Primary and Alternate Gaseous Effluent Sampler Flowrate Measuring Devices per CR 04-09895. Attachment C Tables were also changed to denote transition of ODCM Channel Checks from Operations (L5 Logs) to Nuclear Environmental & Chemistry (Form 1/2-ADM-0606.F01 & F02) per CR 05-01422. Also, per Improved Technical Specifications (ITS), changed Attachment C Tables to reflect change in term from CHANNEL FUNCTIONAL TEST to CHANNEL OPERATIONAL TEST (COT), and added step 4.1.2 to identify requirements for ODCM changes record review and retention requirements. Revised step 5.3 to require ODCM changes be reviewed and accepted by PORC per CR 05-03306.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 53 of 103
8.2.23.1.2	<u>Procedure 1/2-ODC-2.01, Rev 5</u> : Revised the alarm setpoints of [2SWS-RQ101] via vendor calculation Package No. 10080-UR(B)-508. These changes reflect the Extended Power Uprate (EPU) at Unit 2 per ECP-04-0441, Unit 2 TS Amendment No. 156 and CR 06-6476-01.		
8.2.23.1.3	<u>Procedure 1/2-ODC-2.03, Rev 1</u> : Updated the existing REMP sampling locations with the most recent survey results that were performed using a Global Positioning System per CR 05-01390-02.		
8.2.23.1.4	<u>Procedure 1/2-ODC-3.02, Rev 2</u> : Changed ownership of procedure from the Radiation Protection Section to the Nuclear Environmental & Chemistry Section per CR 05-01169-20.		
8.2.23.1.5	<u>Procedure 1/2-ODC-2.03, Rev 1, Procedure 1/2-ODC-2.04, Rev 1 and Procedure 1/2-ODC-3.01, Rev 1</u> : Changed ownership of procedures from the Radiation Protection Section to the Nuclear Environmental & Chemistry Section per CR 05-01169-17, CR 05-01169-18 and CR 06-01169-19.		
8.2.23.2	The justifications used for change (23) of the ODCM are as follows:		
8.2.23.2.1	<u>Procedure 1/2-ODC-1.01, Rev 5</u> : Changing Attachment C, Table F: 3a of the procedure matrix to add Form 1/2-ENV-01.04.F01 as documentation for performing the Channel Functional Test of the Unit 1 Primary and Alternate Gaseous Effluent Sampler Flowrate Measuring Devices is considered a procedure correction, because no Acceptance Criteria was altered. Transition of ODCM Channel Checks from Operations (L5 Logs) to Nuclear Environmental & Chemistry (Form 1/2-ADM-0606.F01 & F02) is also considered a procedure correction, because the no Acceptance Criteria was altered. <u>SINCE</u> these changes merely correct the procedure matrix, <u>THEN</u> the changes will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. As previously noted, these procedure changes implement Corrective Actions per CR 04-09895, CR 05-01422 and CR 05-03306.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 54 of 103
8.2.23.2.2	<p><u>Procedure 1/2-ODC-2.01, Rev 5</u>: Updating the alarm setpoints is considered a procedure correction, because this merely updates the ODCM to agree with previously approved documents that were implemented with TS Amendments. <u>SINCE</u> the change merely updates the ODCM, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. <u>SINCE</u> PORC review & acceptance is required per TS 6.14 & 1/2-ADM-1640, <u>THEN</u> the review is considered complete per Regulatory Applicability Determination RAD-06-04585. As previously noted, these procedure changes implement Corrective Actions per CR 06-6476-01.</p>		
8.2.23.2.3	<p><u>Procedure 1/2-ODC-2.03, Rev 1</u>: Updating the existing REMP sampling locations with the most recent survey results that were performed using a Global Positioning System is considered a procedure correction. <u>SINCE</u> the change provides more accurate distances to existing REMP sampling locations, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. The procedure change implements Corrective Actions per CR 04-00149-12 and CR 05-01390-02.</p>		
8.2.23.2.4	<p><u>Procedure 1/2-ODC-2.03, Rev 1, Procedure 1/2-ODC-2.04, Rev 1 and Procedure 1/2-ODC-3.01, Rev 1</u>: Changing ownership of these procedures from Radiation Protection to Nuclear Environmental & Chemistry is considered a procedure correction. <u>SINCE</u> the changes merely transfers RETS, REMP and ODCM responsibilities to a different manager, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. These procedure changes implement Corrective Actions per CR 05-01169-17, CR 05-01169-18 and CR 06-01169-19.</p>		
8.2.24	<u>Change (24) of BV-1 and 2 ODCM (Effective May 2007)</u>		
8.2.24.1	A description of the changes implemented with this revision are as follows:		
8.2.24.1.1	<p><u>Procedure 1/2-ODC-3.03, Rev 6</u>: Incorporated Improved Technical Specifications (ITS). This includes transfer of programmatic controls for BV-2 Noble Gas Effluent Steam Monitors [2MSS-RQ101A], [2MSS-RQ101B] and [2MSS-RQ101C] from the Technical Specifications to ODCM procedure 1/2-ODC-3.03 (Attachment D Tables 3.3-6 and 4.3-3). Reference CR 05-03306.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 55 of 103
8.2.24.1.2	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revised Attachment J to update the outside liquid storage tank activity limits via Calculation Package No. ERS-ATL-95-007, R2. Reference SAP Order 200197646-0110.</p>		
8.2.24.1.3	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revised Attachment E to clarify that the Applicability for tank level indicating devices is during additions to the tank. Reference CR 06-04944.</p>		
8.2.24.1.4	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revised Attachment E Table 3.3-12 to add an alternate Action when the primary Flow Rate Measurement Device [FT-1CW-101-1] is not OPERABLE. The alternate Action (25) uses local measurements (as described in 1MSP-31.06-I) to determine a total dilution flow rate during liquid effluent releases. Reference SAP Order 200240681.</p>		
8.2.24.1.5	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revised Attachment F Tables 3.3-13 and 4.3-13 to clarify the Functional Location of the Sampler Flow Rate Monitors for the BV-2 gaseous effluent release pathways. Specifically, the procedure was changed to refer to Functional Location [2HVS-FIT101-1] instead of [2HVS-FIT101], [2RMQ-FIT301-1] instead of [2RMQ-FIT301], [2HVL-FIT112-1] instead of [2HVL-FIT112], and [2RMQ-FIT303-1] instead of [2RMQ-FIT303]. Reference CR07-12924 and SAP Order 200247228-0410.</p>		
8.2.24.2	The justifications used for change (24) of the ODCM are as follows:		
8.2.24.2.1	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Incorporating the Improved Technical Specifications (ITS) is considered a simple change, because this was performed in accordance with the guidance provided in Unit 1/2 Technical Specification Amendments No. 278/161. The ITS upgrade includes transfer of programmatic controls for BV-2 Noble Gas Effluent Steam Monitors [2MSS-RQ101A], [2MSS-RQ101B] and [2MSS-RQ101C] from the Technical Specifications to ODCM procedure 1/2-ODC-3.03 (Attachment D Tables 3.3-6 and 4.3-3. <u>SINCE</u> the change was performed in accordance with the TS Amendments, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. The procedure change implements Corrective Actions per CR 05-03306.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 56 of 103
8.2.24.2.2	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revising Attachment J to update the outside liquid storage tank activity limits via Calculation Package No. ERS-ATL-95-007, R2 is considered a simple change, because this change merely implements updated release volumes and source-terms from other station documents. <u>SINCE</u> the change was performed in accordance with the guidance provided in Standard Review Plan 15.7.3 of NUREG-0800, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. The procedure change implements Corrective Actions per SAP Order 200197646-0110.</p>		
8.2.24.2.3	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revising Attachment E to indicate that the Applicability for tank level indicating devices is during additions to the tank is considered a simple change, because this merely clarifies the existing Applicability of the instrument. <u>SINCE</u> this change merely provides clarification of existing Applicability, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. The procedure change implements Corrective Actions per CR 06-04944-01.</p>		
8.2.24.2.4	<p><u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revising Attachment E Table 3.3-12 to add an alternate Action when the primary Flow Rate Measurement Device [FT-1CW-101-1] is not OPERABLE is considered a simple change, because use of an alternate Action does not modify the intent of estimating flow rate when the primary and alternate flow rate instruments are not OPERABLE. <u>SINCE</u> this change merely provides an alternate means of estimating dilution flow rate during liquid releases, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. The procedure change implements Corrective Actions per SAP Order 200240681.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 57 of 103
<p>8.2.24.2.5 <u>Procedure 1/2-ODC-3.03, Rev 6:</u> Revising Attachment F Tables 3.3-13 and 4.3-13 to clarify the Functional Location of the Sampler Flow Rate Monitors for the BV-2 gaseous effluent release pathways is considered a simple change, because this merely clarifies the actual Functional Location in use. <u>SINCE</u> this change merely updates a location title, <u>THEN</u> the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. The procedure change implements Corrective Actions per CR 07-12924 and SAP Order 200247228-0410.</p> <p>8.2.25 <u>Change (25) of BV-1 and 2 ODCM (Effective May 2009)</u></p> <p>8.2.25.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.25.1.1 <u>Procedure 1/2-ODC-1.01 Rev 7:</u> Removed the requirement for PORC review and acceptance of changes made to the ODCM.</p> <p>8.2.25.1.2 <u>Procedure 1/2-ODC-1.01, Rev 7:</u> Added MSP and OST references for EPP-EAL area and process monitors to Attachment C, Table F: 1a and 1b. Specifically, this includes area monitors RM-1RM-201, RM-1RM-202, RM-1RM-203, RM-1RM-210, RM-1RM-212, 2RMP-RQ204, 2RMP-RQ210, 2RMR-RQ201, 2RMR-RQ202B, 2RMR-RQ203, 2RMS-RQ223, and process monitors RM-1CH-101A, RM-1CH-101B, RM-1RW-100A, RM-1RW-100B, RM-1RW-100C, RM-1RW-100D, RM-1VS-103A, RM-1VS-103B, 2CHS-RQ101A, 2CHS-RQ101B, 2SWS-RQ100A, 2SWS-RQ100B, 2SWS-RQ100C, 2SWS-RQ100D, 2SWS-RQ101, 2SWS-RQ102, 2RMF-RQ301A, 2RMF-RQ301B. Reference CR09-53803-13.</p> <p>8.2.25.1.3 <u>Procedure 1/2-ODC-1.01, Rev 7:</u> Revised Attachment C Tables of the procedure matrix to remove obsolete forms and procedures used for ODCM Channel Checks. Specifically, Form 1/2-ADM-0606.F01, Form 1/2-ADM-0606.F02, Form 1/2-HPP-3.07.003.F01 and procedures 1/2-HPP-3.06.005, 1/2-HPP-3.06.006 & 1/2-HPP-3.06.012 were removed from the procedure matrix. Reference SAP Order 200257692-0360 and 0390.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 58 of 103
8.2.25.1.4	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Added the Coolant Recovery Tanks [1BR-TK-4A/4B] as Liquid Waste Tanks to Section 8.4 description and Attachment D Figures 1.4-1 and 1.4-2. Added a default 2-tank volume recirculation time of 45.7 hrs for the Coolant Recovery Tanks [1BR-TK-4A/4B] to Attachment B Table 1.2-1a. Added the Cesium Removal Ion Exchangers [1BR-I-1A/1B and 2BRS-IOE21A/21B] to Section 8.4 description and Attachment B Figures 1.4-1 and 1.4-2. Revised the recirculation times in Attachment B Table 1.2-1a and 1.2-1b to indicate the times for nominal tank volume and maximum tank volume. Reference CR 05-00004-15, CR 05-00004-17 and SAP Order 200197646-0010.</p>		
8.2.25.1.5	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Revised Attachment D Figure 1.4-3 to remove Sewage Treatment Plants (STP) Outfalls 113 and 203 due to retirement of the STP and to remove Outfall 501. Water is no longer discharged via these outfalls. Reference SAP Order 200197646-0660.</p>		
8.2.25.1.6	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Revised section 8.1.1.1 to incorporate alarm setpoints for all possible detector combinations for [RM-1DA-100]. Specifically, due to obsolescence of the original Model 843-30 and 843-32 detectors that were previously installed in [RM-1DA-100], the vendor has upgraded them to Model 843-30R and 843-32R detectors, which include upgraded efficiency data as well. Reference SAP Order 200197646-0810.</p>		
8.2.25.1.7	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Added EPP-EAL area and process monitors to Attachment D, Tables 3.3-6 and 4.3-3. Specifically, this includes area monitors RM-1RM-201, RM-1RM-202, RM-1RM-203, RM-1RM-210, RM-1RM-212, 2RMP-RQ204, 2RMP-RQ210, 2RMR-RQ201, 2RMR-RQ202B, 2RMR-RQ203, 2RMS-RQ223, and process monitors RM-1CH-101A, RM-1CH-101B, RM-1RW-100A, RM-1RW-100B, RM-1RW-100C, RM-1RW-100D, RM-1VS-103A, RM-1VS-103B, 2CHS-RQ101A, 2CHS-RQ101B, 2SWS-RQ100A, 2SWS-RQ100B, 2SWS-RQ100C, 2SWS-RQ100D, 2SWS-RQ101, 2SWS-RQ102, 2RMF-RQ301A, 2RMF-RQ301B. Other editorial changes included adding EAL references to existing liquid and gaseous radiation monitors provided in Attachment E and Attachment F, respectively. Reference CR 09-53803-10.</p>		
8.2.25.1.8	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Added a definition for Channel Functional Test and revised the definition for Channel Operational Test to indicate that these definitions have the same requirements and, therefore, are considered equal. Reference SAP Order 200197646-0300 and CR 07-31083.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 59 of 103
8.2.25.1.9	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Revised Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 & 4.3-13 to provide added clarifications and to remove unnecessary information, as follows: (1) added the word "or" where it is missing from Attachment F, Table 3.3-13 & 4.3-13, (2) removed grab samples from the list of alternates in Table 3.3-13 and 4.3-13, because a grab sample is an "action", not an "alternate", (3) added notations in Table 3.3-12 and 3.3-13 to indicate that Condition Report generation and reporting in the Radioactive Effluent Release Report (per Control 3.3.3.9 Action b and 3.3.3.10 Action b) do not apply when using an alternate to satisfy inoperability of the primary instrument beyond 30 days, and (4) removed surveillances for Preplanned Method of Monitoring (PMM) from Table 4.3-3, because surveillances only apply to instruments, not methods. Reference SAP Order 200247228-0450.</p>		
8.2.25.1.10	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Revised Attachment E, Table 3.3-12, Table 4.3-12 and Action 25A to clarify the 1st and 2nd alternates to the flow rate measurement devices used for the cooling tower blowdown line. Specifically, 1st alternate will use local measurements via 1MSP-31.06-I, and the 2nd alternate will use the individual Units' devices. Reference SAP Order 200240681-0020.</p>		
8.2.25.2	<p>The justifications used for change (25) of the ODCM are as follows:</p>		
8.2.25.2.1	<p><u>Procedure 1/2-ODC-1.01 Rev 7:</u> Removed the requirement for PORC review and acceptance of changes made to the ODCM as it is no longer a requirement of ITS 5.5.1.</p>		
8.2.25.2.2	<p><u>Procedure 1/2-ODC-1.01, Rev 7:</u> Adding MSP and OST references for EPP-EAL area and process monitors to Attachment C, Table F: 1a and 1b does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per CR 09-53803-13.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 60 of 103
8.2.25.2.3	<p><u>Procedure 1/2-ODC-1.01, Rev 7:</u> Revising Attachment C Tables of the procedure matrix to remove obsolete forms and procedures used for ODCM Channel Checks does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200257692-0360 and 0390.</p>		
8.2.25.2.4	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Adding; (1) the Coolant Recovery Tanks as Liquid Waste Tanks, (2) adding a default 2-tank volume recirculation time for the Coolant Recovery Tanks, (3) adding the Cesium Removal Ion Exchangers, and (4) revising the recirculation times to indicate the times for nominal tank volume and maximum tank volume does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per CR05-00004-15, CR05-00004-17 and SAP Order 200197646-0010.</p>		
8.2.25.2.5	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Revising Attachment D Figure 1.4-3 to remove Sewage Treatment Plants (STP) Outfalls 113 and 203 does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200197646-0660.</p>		
8.2.25.2.6	<p><u>Procedure 1/2-ODC-2.01, Rev 6:</u> Revising Section 8.1.1.1 to incorporate alarm setpoints for all possible detector combinations for [RM-1DA-100] does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200197646-0810.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 61 of 103
8.2.25.2.7	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Adding EPP-EAL area and process monitors to Attachment D, Tables 3.3-6 and 4.3-3 (and adding EAL references to existing liquid and gaseous radiation monitors Attachment E and Attachment F) does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per CR 09-53803-10.</p>		
8.2.25.2.8	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Adding a definition for Channel Functional Test and revising the definition for Channel Operational Test to indicate that these definitions have the same requirements (i.e., considered equal) does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200197646-0300 and CR 07-31083.</p>		
8.2.25.2.9	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Revising Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 & 4.3-13 to provide added clarifications and to remove unnecessary information does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200247228-0450.</p>		
8.2.25.2.10	<p><u>Procedure 1/2-ODC-3.03, Rev 7:</u> Revising Attachment E, Table 3.3-12, Table 4.3-12 and Action 25A to clarify the 1st and 2nd alternates to the flow rate measurement devices used for the cooling tower blowdown line does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in May 2007. This change implements Corrective Actions per SAP Order 200240681-0020.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 62 of 103

8.2.26 Change (26) of BV-1 and 2 ODCM (Effective May 2009)

8.2.26.1 A description of the changes implemented with this revision are as follows:

8.2.26.1.1 Procedure 1/2-ODC-1.01 Rev 8: Reverted procedure back to the contents of Revision 6.

8.2.26.1.2 Procedure 1/2-ODC-2.01, Rev 7: Reverted procedure back to the contents of Revision 5.

8.2.26.1.3 Procedure 1/2-ODC-3.03, Rev 8: Reverted procedure back to the contents of Revision 6.

8.2.26.2 The justifications used for change (26) of the ODCM are as follows:

8.2.26.2.1 Procedure 1/2-ODC-1.01 Rev 8: It was determined that the implementation of Revision 7 was premature because supporting procedure changes were not completed and surveillances required by these changes were not in place. This procedure was reverted back to the contents of the previous revision. This change implements Corrective Actions initiated by and described in CR 09-59875.

8.2.26.2.2 Procedure 1/2-ODC-2.01, Rev 7: It was determined that the implementation of Revision 6 was premature because supporting procedure changes were not completed and surveillances required by these changes were not in place. This procedure was reverted back to the contents of the previous revision. This change implements Corrective Actions initiated by and described in CR 09-59875.

8.2.26.2.3 Procedure 1/2-ODC-3.03, Rev 8: It was determined that the implementation of Revision 7 was premature because supporting procedure changes were not completed and surveillances required by these changes were not in place. This procedure was reverted back to the contents of the previous revision. This change implements Corrective Actions initiated by and described in CR 09-59875.

8.2.27 Change (27) of BV-1 and 2 ODCM (Effective August 2010)

8.2.27.1 A description of the changes implemented with this revision are as follows:

8.2.27.1.1 Procedure 1/2-ODC-1.01, Rev 9: Added revision history to capture Changes 25 and 26.

8.2.27.1.2 Procedure 1/2-ODC-1.01, Rev 9: Removed the requirement for PORC review and acceptance of changes made to the ODCM.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 63 of 103
8.2.27.1.3	<p><u>Procedure 1/2-ODC-1.01, Rev 9:</u> Revised Attachment C Tables of the procedure matrix to remove obsolete forms and procedures used for ODCM Channel Checks. Specifically, Form 1/2-ADM-0606.F01, Form 1/2-ADM-0606.F02, Form 1/2-HPP-3.07.003.F01 and procedures 1/2-HPP-3.06.005, 1/2-HPP-3.06.006 were removed from the procedure matrix (superseded by 1/2-ADM-1611.F03, 1/2-ADM-1611.F04, NOP-OP-4702-01, 1/2-ENV-05.04, and 1/2-ENV-05.05, respectively). Reference SAP Order 200257692-0360 and 0390. References were updated for Operational Surveillance Tests (OSTs) for Channel Functional Tests that have since been split from one large OST into specific OSTs for each radiation monitor and obsolete Chemistry and Environmental procedures.</p>		
8.2.27.1.4	<p><u>Procedure 1/2-ODC-2.01, Rev 8:</u> Revised Attachment D Figure 1.4-3 to remove Sewage Treatment Plants (STP) Outfalls 113 and 203 due to retirement of the STP and to remove U1 Steam Generator Blowdown Filter Backwash Outfall 501. Water is no longer discharged via these outfalls. Reference SAP Order 200197646-0660.</p>		
8.2.27.1.5	<p><u>Procedure 1/2-ODC-2.01, Rev 8:</u> Revised section 8.1.1.1 to incorporate alarm setpoints for all possible detector combinations for [RM-1DA-100]. Specifically, due to obsolescence of the original Model 843-30 and 843-32 detectors that were previously installed in [RM-1DA-100], the vendor has upgraded them to Model 843-30R and 843-32R detectors, which include upgraded efficiency data as well. Reference SAP Order 200197646-0810.</p>		
8.2.27.1.6	<p><u>Procedure 1/2-ODC-2.01, Rev 8:</u> Added the Coolant Recovery Tanks [1BR-TK-4A/4B] as Liquid Waste Tanks to Section 8.4 description and Attachment D Figures 1.4-1 and 1.4-2. Added a default 2-tank volume recirculation time of 45.7 hrs for the Coolant Recovery Tanks [1BR-TK-4A/4B] to Attachment B Table 1.2-1a. Added the Cesium Removal Ion Exchangers [1BR-I-1A/1B and 2BRS-IOE21A/21B] to Section 8.4 description and Attachment B Figures 1.4-1 and 1.4-2. Revised the recirculation times in Attachment B Table 1.2-1a and 1.2-1b to indicate the times for nominal tank volume and maximum tank volume. Reference CR 05-00004-15, CR 05-00004-17 and SAP Order 200197646-0010.</p>		
8.2.27.1.7	<p><u>Procedure 1/2-ODC-2.03, Rev 2:</u> Corrected sampling location descriptions for TLD #94 and #95; Changed sample designation from #49 to #49A; Clarified program requirements for garden sampling. These changes implement Corrective Actions for CA #10-77489-1.</p>		
8.2.27.1.8	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Added a definition for Channel Functional Test and revised the definition for Channel Operational Test to indicate that these definitions have the same requirements and, therefore, are considered equal. Reference SAP Order 200197646-0300 and CR07-31083.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 64 of 103
8.2.27.1.9	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revised Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 & 4.3-13 to provide added clarifications and to remove unnecessary information, as follows: (1) added the word "or" where it is missing from Attachment F, Table 3.3-13 & 4.3-13, (2) removed grab samples from the list of alternates in Table 3.3-13 and 4.3-13, because a grab sample is an "action", not an "alternate", (3) added notations in Table 3.3-12 and 3.3-13 to indicate that Condition Report generation and reporting in the Radioactive Effluent Release Report (per Control 3.3.3.9 Action b and 3.3.3.10 Action b) do not apply when using an alternate to satisfy inoperability of the primary instrument beyond 30 days, and (4) removed surveillances for Preplanned Method of Monitoring (PMM) from Table 4.3-3, because surveillances only apply to instruments, not methods. Reference SAP Order 200247228-0450.</p>		
8.2.27.1.10	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revised Attachment E, Table 3.3-12, Table 4.3-12 and Action 25A to clarify the 1st and 2nd alternates to the flow rate measurement devices used for the cooling tower blowdown line. Specifically, 1st alternate will use the individual Units' devices, and the 2nd alternate will use local measurements via 1MSP-31.06-I. The alternates were chosen in this particular order to support practicality of plant operations, rather than the way they were initially proposed in the SAP order. Reference SAP Order 200240681-0020.</p>		
8.2.27.1.11	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revised Attachment D Tables 3.3-6 and 4.3-3 to remove obsolete forms and procedures Specifically, Form 1/2-ENV-05.14.F01 was removed.</p>		
8.2.27.2	The justifications used for change (27) of the ODCM are as follows:		
8.2.27.2.1	<p><u>Procedure 1/2-ODC-1.01 Rev 9:</u> Because it was determined that the implementation of Revision 7 was premature and this procedure was reverted back to the exact contents of the previous revision, the revision history was not captured. PORC review and acceptance of this change was completed in August 2010.</p>		
8.2.27.2.2	<p><u>Procedure 1/2-ODC-1.01, Rev 9:</u> Removed the requirement for PORC review and acceptance of changes made to the ODCM as it is no longer a requirement of ITS 5.5.1. PORC review and acceptance of this change was completed in August 2010.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 65 of 103	
8.2.27.2.3	<u>Procedure 1/2-ODC-1.01, Rev 9:</u> Revising Attachment C Tables of the procedure matrix to remove obsolete forms and procedures does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. This change implements some of the corrective actions per SAP Order 200257692-0360 and 0390. PORC review and acceptance of this change was completed in August 2010.		
8.2.27.2.4	<u>Procedure 1/2-ODC-2.01, Rev 8:</u> Revising Attachment D Figure 1.4-3 to remove Sewage Treatment Plants (STP) Outfalls 113 and 203 and U1 Steam Generator Blowdown Filter Backwash Outfall 501 does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per SAP Order 200197646-0660.		
8.2.27.2.5	<u>Procedure 1/2-ODC-2.01, Rev 8:</u> Revising Section 8.1.1.1 to incorporate alarm setpoints for all possible detector combinations for [RM-1DA-100] does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per SAP Order 200197646-0810.		
8.2.27.2.6	<u>Procedure 1/2-ODC-2.01, Rev 8:</u> Adding; (1) the Coolant Recovery Tanks as Liquid Waste Tanks, (2) adding a default 2-tank volume recirculation time for the Coolant Recovery Tanks, (3) adding the Cesium Removal Ion Exchangers, and (4) revising the recirculation times to indicate the times for nominal tank volume and maximum tank volume does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per CR 05-00004-15, CR 05-00004-17 and SAP Order 200197646-0010.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 66 of 103
8.2.27.2.7	<p><u>Procedure 1/2-ODC-2.03, Rev 2:</u> All changes in this revision were to correct labeling deficiencies. They did not change program requirements or the implementation of program sampling. There is no impact to the accuracy or reliability of the Radiological Environmental Monitoring Program. This change implements Corrective Action 10-77489-1. PORC review of these changes was completed on August 2010.</p>		
8.2.27.2.8	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Adding a definition for Channel Functional Test and revising the definition for Channel Operational Test to indicate that these definitions have the same requirements (i.e., considered equal) does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per SAP Order 200197646-0300 and CR 07-31083.</p>		
8.2.27.2.9	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revising Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 & 4.3-13 to provide added clarifications and to remove unnecessary information does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per SAP Order 200247228-0450.</p>		
8.2.27.2.10	<p><u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revising Attachment E, Table 3.3-12, Table 4.3-12 and Action 25A to clarify the 1st and 2nd alternates to the flow rate measurement devices used for the cooling tower blowdown line does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010. This change implements Corrective Actions per SAP Order 200240681-0020.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 67 of 103
<p>8.2.27.2.11 <u>Procedure 1/2-ODC-3.03, Rev 9:</u> Revising Attachment D Tables to remove obsolete forms and procedures does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50. Also, the change will not impact the accuracy or reliability of effluent dose or alarm setpoint calculation. PORC review and acceptance of this change was completed in August 2010.</p> <p>8.2.28 <u>Change (28) of BV-1 and 2 ODCM (Effective December 2010)</u></p> <p>8.2.28.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.28.1.1 <u>Procedure 1/2-ODC-1.01, Rev 10:</u> Revision history was updated and references to CTS and ITS conversion project were removed.</p> <p>8.2.28.1.2 <u>Procedure 1/2-ODC-2.01, Rev 9:</u> Removed description that batch releases of liquid waste are processed by recirculation through eductors. Deleted Attachment B which referenced minimum liquid waste batch release recirculation times and added description that liquid waste recirculation times to achieve two tank volumes are calculated based upon actual tank volume and pump capacity.</p> <p>8.2.28.2 The justifications used for change (28) of the ODCM are as follows:</p> <p>8.2.28.2.1 <u>Procedure 1/2-ODC-1.01 Rev 10:</u> Changes are administrative only because ITS conversion project has been completed. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 68 of 103	
<p>8.2.28.2.2 <u>Procedure 1/2-ODC-2.01 Rev 9:</u> Change removes description that batch releases of liquid waste be recirculated through tanks with eductors. Eductors are not currently installed on liquid waste tanks. Per BVPS-1 UFSAR Section 1.3.3.21, the recommendations contained in Regulatory Guide 1.21 (1974) are followed. The RG states that (prior to sampling) “large volumes of liquid waste should be mixed in as short a time interval as practicable to assure that any sediments or particulate solids are distributed uniformly in the waste mixture.” BVPS-2 UFSAR Table 1.8-1 contains a similar statement. As such, current licensing bases does not require eductors for processing batch releases of liquid waste. Attachment B was removed. This attachment provided information on minimum recirculation times of liquid waste tanks for batch liquid releases. Recirculation times are calculated based upon actual tank volume and pump capacity and this description was added. The change does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.29 <u>Change (29) of BV-1 and 2 ODCM (Effective January 2011)</u></p> <p>8.2.29.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.29.1.1 <u>Procedure 1/2-ODC-2.02, Rev 3:</u> This revision corrected a spelling error in the title of Attachment C. A typo was corrected in equation 2.2-13. Calculated values of the organ dose parameters, P_{it}, listed in Table 2.2-13 were verified to have been accurately calculated using the breathing rate of 3.7E9 in Calculation Package No. ERS-HHM-84-20, ODCM Update of Table 2.2-1S and Calculation Package No. ERS-ATL-89-014, Verification/Validation of ODCM R Values. Dose factors for Selenium-75 (Se-75) were provided by ABS Consulting. Attachment H (Table 2.2-13) and Attachment J (Tables 2.3-2 through 2.3-20) were copied into excel/word format and updated to include Se-75.</p> <p>8.2.29.1.2 <u>Procedure 1/2-ODC-3.03 Rev 10:</u> The previous revisions to the procedure (Change 25, Revision 7 and then again in Change 27, Revision 9) added notations in Table 3.3-12 and 3.3-13 to indicate that Condition Report generation and reporting in the Radioactive Effluent Release Report (per Control 3.3.3.9 Action b and 3.3.3.10 Action b) do not apply when using an alternate to satisfy inoperability of the primary instrument beyond 30 days. However, Control 3.3.3.9 Action b and 3.3.3.10 Action b provided conflicting guidance because the footnote was not included on these pages. Therefore, the footnote was added to Control 3.3.3.9 Action b and 3.3.3.10 Action b in this revision.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 69 of 103
<p>8.2.29.2 The justifications used for change (29) of the ODCM are as follows:</p> <p>8.2.29.2.1 <u>Procedure 1/2-ODC-2.02, Rev 3:</u> This change corrects a minor typo and adds an isotope to the program. The change does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.29.2.2 <u>Procedure 1/2-ODC-3.03 Rev 10:</u> Revising the Controls for Attachment E Table 3.3-12 and Attachment F, Tables 3.3-13 to provide added clarification does not remove or modify any standard ODCM Controls currently in place. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.30 <u>Change (30) of BV-1 and 2 ODCM (Effective September 2011)</u></p> <p>8.2.30.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.30.1.1 <u>Procedure 1/2-ODC-2.03, Rev 3:</u> This change retired TLD Station #88 and added Station #88A according to CA G203-2011-97516-001 due to repeated vandalism of the sample point.</p> <p>8.2.30.2 The justifications used for change (29) of the ODCM are as follows:</p> <p>8.2.30.2.1 <u>Procedure 1/2-ODC-2.03, Rev 3:</u> This revision exchanges two sample locations within the same sector, therefore maintaining the same total number of monitoring points located around BVPS. The change does not remove or modify any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.31 <u>Change (31) of BV-1 and 2 ODCM (Effective December 2011)</u></p> <p>8.2.31.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.31.1.1 <u>Procedure 1/2-ODC-2.03, Rev 4:</u> This revision increases vegetation sampling requirements when milk sampling requirements cannot be met due to milk sampling locations being unavailable.</p> <p>8.2.31.1.2 <u>Procedure 1/2-ODC-3.03, Rev 11:</u> This revision increases vegetation sampling requirements when milk sampling requirements cannot be met due to milk sampling locations being unavailable.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 70 of 103	
<p>8.2.31.2 The justifications used for change (31) of the ODCM are as follows:</p> <p>8.2.31.2.1 <u>Procedure 1/2-ODC-2.03, Rev 4</u>: Because of decreasing milk locations in the vicinity of BVPS, the REMP needed to be revised to provide instructions for sampling when we do not have enough milk locations to meet ODCM requirements. The vegetation sampling program is in accordance with NUREG-1301. The change does not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.31.2.2 <u>Procedure 1/2-ODC-3.03, Rev 11</u>: Because of decreasing milk locations in the vicinity of BVPS, the REMP needed to be revised to provide instructions for sampling when we do not have enough milk locations to meet ODCM requirements. The vegetation sampling program is in accordance with NUREG-1301. The change does not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p> <p>8.2.32 <u>Change (32) of BV-1 and 2 ODCM (Effective February 2012)</u></p> <p>8.2.32.1 A description of the changes implemented with this revision are as follows:</p> <p>8.2.32.1.1 <u>Procedure 1/2-ODC-2.01, Rev 10</u>: This revision implements changes to the Liquid Rad Waste System per ECP 11-0049 in order to continue improvements to the system after the site added the Coolant Recovery Tanks [BR-TK-4A/B] to the liquid waste system in revision 8 (ODCM Change 27). Other descriptions to the liquid waste system components were revised to better reflect actual plant conditions (for example, normal rate of discharge through the radiation monitor for BR-TK-4A/B or the resin selection/sequence for LW-I-2).</p> <p>8.2.32.2 The justifications used for change (32) of the ODCM are as follows:</p> <p>8.2.32.2.1 <u>Procedure 1/2-ODC-2.01, Rev 10</u>: This change provides a description of the Rad Waste System. It does not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 71 of 103

8.2.33 Change (33) of BV-1 and 2 ODCM (Effective June 2012)

8.2.33.1 A description of the changes implemented with this revision are as follows:

8.2.33.1.1 Procedure 1/2-ODC-2.01, Rev 11: This revision adds Antimony-126 (Sb-126) to Attachment B Table 1.3-1, Ingestion Dose Commitment Factors, after the isotope was identified during 1R21. After revising ERS-ATL-83-027, the calculation package for liquid Ingestion Dose Commitment Factors, it was noticed that other isotopes previously calculated in the package were not included in Attachment B. These were also added to the ODCM at this time. The revision also reduces the HHSP and HSP for Unit 1 Radiation Monitor RM-RW-100 per Calculation Package ERS-ATL-93-021 Rev. 4.

8.2.33.2 The justifications used for change (33) of the ODCM are as follows:

8.2.33.2.1 Procedure 1/2-ODC-2.01, Rev 11: This change added the ability to calculate dose for additional isotopes and lowered the alarm setpoints for a radiation monitor. It did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.

8.2.34 Change (34) of BV-1 and 2 ODCM (Effective July 2012)

8.2.34.1 A description of the changes implemented with this revision are as follows:

8.2.34.1.1 Procedure 1/2-ODC-1.01, Rev 16: Removed reference to analytical procedure 1/2-ENV-05.25. This procedure is slated for deletion in the near future.

8.2.34.1.2 Procedure 1/2-ODC-2.01, Rev 12: This revision adds the ability to discharge processed and unprocessed liquid wastes from the low level drains tanks [LW-TK-3A/B]. These tanks were originally designed with the ability to discharge to the Ohio River. They are not generally used due to their small volume capacity. A request was made by Operations to allow discharge of these tanks to prevent unnecessary damage/depletion of the liquid waste ion exchanger(s) from non-radioactive water containing high chemical contaminants.

8.2.34.2 The justifications used for change (34) of the ODCM are as follows:

8.2.34.2.1 Procedure 1/2-ODC-1.01, Rev 16: This change removed a reference throughout the document. It did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 72 of 103

8.2.34.2.2 Procedure 1/2-ODC-2.01, Rev 12: This change added the ability to discharge processed and unprocessed liquid wastes from the low level drains tanks [LW-TK-3A/B]. It did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.

8.2.35 Change (35) of BV-1 and 2 ODCM (Effective March 2013)

8.2.35.1 A description of the changes implemented with this revision are as follows:

8.2.35.1.1 Procedure 1/2-ODC-1.01, Rev 17: Removed reference Tables 1.2-1a and 1.2-1b that were deleted from 1/2-ODC-2.01 (previous Attachment B) in revision 9.

8.2.35.1.2 Procedure 1/2-ODC-2.01, Rev 13: This change added descriptions of the U1 Chemical Waste Sump and U2 Cable Vault Sump discharge points. ODCM controls are now officially established for these sumps, including two volume recirculation and batch sampling requirements.

8.2.35.2 The justifications used for change (35) of the ODCM are as follows:

8.2.35.2.1 Procedure 1/2-ODC-1.01, Rev 17: This change removed a reference from the document that was overlooked in a previous revision. It did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.

8.2.35.2.2 Procedure 1/2-ODC-2.01, Rev 13: This change added descriptions of discharge points and employed ODCM controls where not previously implemented. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.

8.2.36 Change (36) of BV-1 and 2 ODCM (Effective February 2014)

8.2.36.1 A description of the changes implemented with this revision are as follows:

8.2.36.1.1 Procedure 1/2-ODC-2.01, Rev 14: This change added descriptions of the new Unit 1 Liquid Radwaste System components that were installed via ECP 12-0478. New components that were installed include Liquid Waste Pre-Conditioning Filter, Liquid Waste Demineralizer, Rad Waste Reverse Osmosis (RWRO) Pre-filter, RWRO Skid, Polishing Vessel, Antimony Vessel and Sample Sinks.

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 73 of 103
8.2.36.1.2	<u>Procedure 1/2-ODC-2.02, Rev 4:</u> This change added dose equations and dose factors for carbon-14 per notification 600737534 and dose factors for antimonty-126 per notification 600727275 (from CR#2012-17177).		
8.2.36.1.3	<u>Procedure 1/2-ODC-2.03, Rev 5:</u> This change removed Searight's Dairy farm from milk sample locations (Notification 6008201182 and CR#2013-03554)		
8.2.36.2	The justifications used for change (36) of the ODCM are as follows:		
8.2.36.2.1	<u>Procedure 1/2-ODC-2.01, Rev 14:</u> The current Unit 1 Liquid Waste system has been removed and replaced with new components. This change documents and describes the new liquid waste components. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.		
8.2.36.2.2	<u>Procedure 1/2-ODC-2.02, Rev 4:</u> This change added the ability to perform dose calculations for more isotopes. Carbon-14 does not currently have a regulatory limit for discharge, but is required to be reported. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.		
8.2.36.2.3	<u>Procedure 1/2-ODC-2.03, Rev 5:</u> This change removed Searight's Dairy farm from milk sample locations. The local farmer notified Beaver Valley that the dairy would be closing permanently, the dairy cattle would be sold and the property will be utilized for hay bailing and possibly beef cattle. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR 50.		
8.2.37	<u>Change (37) of BV-1 and 2 ODCM (Effective September 2014)</u>		
8.2.37.1	A description of the changes implemented with this revision are as follows:		
8.2.37.1.1	<u>Procedure 1/2-ODC-1.01, Rev 20:</u> This change added 10 CFR 72.104 to the reference and acceptance criteria per ECP 12-0250. The change also documents changes to 1/2-ODC-2.02 R5, 1/2-ODC-2.03 R6, 1/2-ODC-2.04 R2, and 1/2-ODC-3.03 R12.		
8.2.37.1.2	<u>Procedure 1/2-ODC-2.02, Rev 5:</u> This change added the definition for "1.1" in equation 2.1(2)-18 per notification 600877226 and added 10 CFR 72.104 to the reference and acceptance criteria per ECP 12-0250.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 74 of 103
8.2.37.1.3	<u>Procedure 1/2-ODC-2.03, Rev 6:</u> This change added 10 CFR 72.104 to the reference and acceptance criteria per ECP 12-0250.		
8.2.37.1.4	<u>Procedure 1/2-ODC-2.04, Rev 2:</u> This change added 10 CFR 72.104 to the reference and acceptance criteria per ECP 12-0250.		
8.2.37.1.5	<u>Procedure 1/2-ODC-3.03, Rev 12:</u> This change added 10 CFR 72.104 to the reference and acceptance criteria and noted ISFSI dose considerations are included in dose calculations per ECP 12-0250.		
8.2.37.2	The justifications used for change (37) of the ODCM are as follows:		
8.2.37.2.1	<u>Procedure 1/2-ODC-1.01, Rev 20:</u> This change added 10 CFR 72.104, Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS, to the reference and acceptance criteria per ECP 12-0250, Independent Spent Fuel Storage Installation (ISFSI) Spent Fuel Storage System (SFSS) System Incorporation. With the installation of the SFSS additional consideration must be given when updating the ODCM. 10 CFR 72.104 document the requirements. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.		
8.2.37.2.2	<u>Procedure 1/2-ODC-2.02, Rev 5:</u> This change added a definition for equation 2.1(2)-18 to provide user clarification and ensure equation formatting is consistent throughout the procedure. This change also added 10 CFR 72.104, Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS, to the reference and acceptance criteria per ECP 12-0250, Independent Spent Fuel Storage Installation (ISFSI) Spent Fuel Storage System (SFSS) System Incorporation. With the installation of the SFSS additional consideration must be given when updating the ODCM. 10 CFR 72.104 document the requirements. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 75 of 103
8.2.37.2.3	<p><u>Procedure 1/2-ODC-2.03, Rev 6:</u> This change added 10 CFR 72.104, Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS, to the reference and acceptance criteria per ECP 12-0250, Independent Spent Fuel Storage Installation (ISFSI) Spent Fuel Storage System (SFSS) System Incorporation. With the installation of the SFSS additional consideration must be given when updating the ODCM. 10 CFR 72.104 document the requirements. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.</p>		
8.2.37.2.4	<p><u>Procedure 1/2-ODC-2.04, Rev 2:</u> This change added 10 CFR 72.104, Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS, to the reference and acceptance criteria per ECP 12-0250, Independent Spent Fuel Storage Installation (ISFSI) Spent Fuel Storage System (SFSS) System Incorporation. With the installation of the SFSS additional consideration must be given when updating the ODCM. 10 CFR 72.104 document the requirements. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.</p>		
8.2.37.2.5	<p><u>Procedure 1/2-ODC-3.03, Rev 12:</u> This change added 10 CFR 72.104, Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS, to the reference and acceptance criteria per ECP 12-0250, Independent Spent Fuel Storage Installation (ISFSI) Spent Fuel Storage System (SFSS) System Incorporation. With the installation of the SFSS additional consideration must be given when updating the ODCM. 10 CFR 72.104 document the requirements. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.</p>		
8.2.38	<u>Change (38) of BV-1 and 2 ODCM (Effective January 2015)</u>		
8.2.38.1	A description of the changes implemented with this revision are as follows:		
8.2.38.1.1	<p><u>Procedure 1/2-ODC-2.01, Rev 15:</u> This change added clarification to section 8.3.1 describing when the factor of 3 can be used, removed the OECi value for Ba-137m and replaced the reference (5) with “-“ for OECi value for Br-85 and Rh-106 from Attachment A, Table 1.1-1a and Table 1.1-1b as noted in notification 600928201.</p>		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 76 of 103
8.2.38.1.2	<p><u>Procedure 1/2-ODC-2.02, Rev 6:</u> This change removed all references, efficiencies and setpoints for the Eberline SPING Radiation Monitors and replaced references, efficiencies and setpoints for the Mirion PING Radiation Monitors. These changes reflect the radiation monitor replacement at Unit 1 per ECP-10-0150, Replacement of BV1 Effluent Radiation Monitoring System Components. The height of the process vent release point was also corrected to align with the USFAR, as noted in notification 600877226.</p>		
8.2.38.1.3	<p><u>Procedure 1/2-ODC-3.02, Rev 3:</u> This change replaced the reference to 10 CFR Part 20.106(b) with 10 CFR Part 20.1301. The reference itself has not changed, only the location, as noted in notification 600877226.</p>		
8.2.38.1.4	<p><u>Procedure 1/2-ODC-3.03, Rev 13:</u> This change removed all references and setpoints for the Eberline SPING Radiation Monitors and replaced references and setpoints for the Mirion PING Radiation Monitors. These changes reflect the radiation monitor replacement at Unit 1 per ECP-10-0150, Replacement of BV1 Effluent Radiation Monitoring System Components.</p>		
8.2.38.2	<p>The justifications used for change (38) of the ODCM are as follows:</p>		
8.2.38.2.1	<p><u>Procedure 1/2-ODC-2.01, Rev 15:</u> This change added clarification for mixing factors and corrected values for Ba-137m in Attachment A to match 10 CFR 20. Also the reference (5) for Br-85 and Rh-106 OECi values were changed to a “-“ because 10 CFR 20 does not list a value. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.</p>		
8.2.38.2.2	<p><u>Procedure 1/2-ODC-2.02, Rev 6:</u> The references, efficiencies, and setpoints for the Eberline SPING Radiation monitors were removed to support ECP 10-0150 which installs new Mirion PING Radiation Monitors. The setpoints for the new Mirion Monitors were determined and approved in calculation package ERS-HHM-87-014, Unit 1/ Unit 2 ODCM Gaseous Effluent Monitor Setpoints and the efficiencies were determined and approved in calculation package ERS-SFL-85-031, Gaseous Effluent Monitor Efficiency Data. The height of the process vent was also revised to align with the UFSAR. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.</p>		

8-11-15

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 77 of 103

8.2.38.2.3

Procedure 1/2-ODC-3.02, Rev 3: This change only updated the reference for 10 CFR Part 20. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.

8.2.38.2.4

Procedure 1/2-ODC-3.03, Rev 13: The references and setpoints for the Eberline SPING Radiation monitors were removed to support ECP 10-0150 which installs new Mirion PING Radiation Monitors. The setpoints for the new Mirion Monitors were determined and approved in calculation package ERS-HHM-87-014, Unit 1/ Unit 2 ODCM Gaseous Effluent Monitor Setpoints. This revision did not remove any standard ODCM Controls specified in NUREG-1301. Therefore, this change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, 10 CFR 72.104 and Appendix I to 10 CFR 50.

-END-

2-11-15

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 78 of 103
ATTACHMENT A Page 1 of 6 LIST OF ODCM TABLES			
<u>LIQUID EFFLUENTS Included in Procedure 1/2-ODC-2.01</u>			
1.1-1a	BV-1 Liquid Source Term		
1.1-1b	BV-2 Liquid Source Term		
1.3-1	A _{IT} Values For An Adult For The Beaver Valley Site		
<u>GASEOUS EFFLUENTS Included in Procedure 1/2-ODC-2.02</u>			
2.1-1a	BV-1 Radionuclide Mix For Gaseous Effluents		
2.1-1b	BV-2 Radionuclide Mix For Gaseous Effluents		
2.1-2a	BV-1 Monitor Detector Efficiencies		
2.1-2b	BV-2 Monitor Detector Efficiencies		
2.2-1	Modes Of Gaseous Release From Beaver Valley Site Vents For Implementation Of 10 CFR 20 And 10 CFR 50		
2.2-2a	BV-1 Radionuclide Mix For Gaseous Effluents		
2.2-2b	BV-2 Radionuclide Mix For Gaseous Effluents		
2.2-3	Distances Of Limiting Maximum Individual Receptors To Release Points For Annual χ/Q Values		
<u>ANNUAL AVERAGE χ/Q Included in Procedure 1/2-ODC-2.02</u>			
2.2-4	BV-1 And 2 Containment Vents (Ground Release)		
2.2-5	BV-1 And 2 Ventilation Vents (Ground Release)		
2.2-6	BV-1 And 2 Process Vent (Elevated Release)		
2.2-7	BV-1 And 2 Turbine Building Vents (Ground Release)		
2.2-8	BV-2 Decontamination Building Vent (Ground Release)		
2.2-9	BV-2 Waste Gas Storage Vault Vent (Ground Release)		
2.2-10	BV-2 Condensate Polishing Building (Ground Release)		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 79 of 103	
ATTACHMENT A Page 2 of 6 LIST OF ODCM TABLES			
<u>NOBLE GAS DOSE FACTORS AND DOSE PARAMETERS Included in 1/2-ODC-2.02</u>			
2.2-11	Dose Factors For Noble Gases And Daughters		
2.2-12	Dose Parameters For Finite Elevated Plumes, Beaver Valley Site		
<u>P&I DOSE PARAMETERS Included in 1/2-ODC-2.02</u>			
2.2-13	Pit Values For A Child For The Beaver Valley Site		
<u>MODES OF GASEOUS RELEASES Included in Procedure 1/2-ODC-2.02</u>			
2.3-1	Modes Of Gaseous Release From The Beaver Valley Site Vents For Implementation Of 10 CFR 20 And 10 CFR 50		
<u>P&I ORGAN DOSE FACTORS Included in 1/2-ODC-2.02</u>			
2.3-2	R Values for Inhalation - Adult		
2.3-3	R Values for Inhalation - Teen		
2.3-4	R Values for Inhalation - Child		
2.3-5	R Values for Inhalation - Infant		
2.3-6	R Values for Ground		
2.3-7	R Values for Vegetation - Adult		
2.3-8	R Values for Vegetation - Teen		
2.3-9	R Values for Vegetation - Child		
2.3-10	R Values for Meat - Adult		
2.3-11	R Values for Meat - Teen		
2.3-12	R Values for Meat - Child		
2.3-13	R Values for Cow Milk - Adult		
2.3-14	R Values for Cow Milk - Teen		
2.3-15	R Values for Cow Milk - Child		
2.3-16	R Values for Cow Milk - Infant		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 80 of 103
ATTACHMENT A Page 3 of 6 LIST OF ODCM TABLES			
2.3-17	R Values for Goat Milk - Adult		
2.3-18	R Values for Goat Milk - Teen		
2.3-19	R Values for Goat Milk - Child		
2.3-20	R Values for Goat Milk - Infant		
<u>CONTINUOUS RELEASE DEPOSITION PARAMETERS (0-5 Miles) Included in Procedure 1/2-ODC-2.02</u>			
2.3-21	BV-1 And 2 Process Vent (Elevated Release)		
2.3-22	BV-1 And 2 Containment Vents (Ground Release)		
2.3-23	BV-1 And 2 Ventilation Vents (Ground Release)		
2.3-24	BV-1 And 2 Turbine Building Vents (Ground Release)		
2.3-25	BV-2 Condensate Polishing Building (Ground Release)		
2.3-26	BV-2 Decontamination Building Vent (Ground Release)		
2.3-27	BV-2 Waste Gas Storage Vault Vent (Ground Release)		
<u>CONTINUOUS RELEASE DEPOSITION PARAMETERS (SPECIAL DISTANCES) Included in Procedure 1/2-ODC-2.02</u>			
2.3-28	BV-1 And 2 Process Vent (Elevated Release)		
2.3-29	BV-1 And 2 Containment Vents (Ground Release)		
2.3-30	BV-1 And 2 Ventilation Vents (Ground Release)		
2.3-31	BV-1 And 2 Turbine Building Vents (Ground Release)		
2.3-32	BV-2 Condensate Polishing Building (Ground Release)		
2.3-33	BV-2 Decontamination Building Vent (Ground Release)		
2.3-34	BV-2 Waste Gas Storage Vault Vent (Ground Release)		
<u>BATCH RELEASE DISPERSION PARAMETERS (Special Distances) Included in Procedure 1/2-ODC-2.02</u>			
2.3-35	BV-1 And 2 Containment Vents (Ground Release)		
2.3-36	BV-1 And 2 Ventilation Vents (Ground Release)		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 81 of 103
ATTACHMENT A Page 4 of 6 LIST OF ODCM TABLES			
2.3-37 BV-1 And 2 Process Vent (Elevated Release)			
<u>BATCH RELEASE DISPERSION PARAMETERS (0-5 Miles) Included in Procedure 1/2-ODC-2.02</u>			
2.3-38 BV-1 And 2 Process Vent (Elevated Release)			
<u>ENVIRONMENTAL MONITORING Included in Procedure 1/2-ODC-2.03</u>			
3.0-1 Radiological Environmental Monitoring Program			
<u>DISPERSION CALCULATION Included in Procedure 1/2-ODC-3.01</u>			
A:1 BV-1 And 2 Release Conditions			
<u>INPUTS TO COMPUTER CODES Included in Procedure 1/2-ODC-3.01</u>			
B:1a Inputs To GALE Code For Generation Of BV-1 Liquid Source Term Mixes			
B:1b Inputs To SWEC LIQ1BB Code For Generation Of BV-2 Liquid Source Term Mixes			
B:2a Inputs To SWEC GAS1BB Code For Generation Of BV-1 Gaseous Source Term Mixes			
B:2b Inputs To SWEC GAS1BB Code For Generation of BV-2 Gaseous Source Term Mixes			
<u>ODCM CONTROLS Included in Procedure 1/2-ODC-3.03</u>			
C:1.1 Operational Modes			
C:1.2 Frequency Notation			
C:3.3-6 Radiation Monitoring Instrumentation			
C:4.3-3 Radiation Monitoring Instrumentation Surveillance Requirements			
C:3.3-12 Radioactive Liquid Effluent Monitoring Instrumentation			
C:4.3-12 Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements			
C:3.3-13 Radioactive Gaseous Effluent Monitoring Instrumentation			
C:4.3-13 Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance Requirements			
C:4.11-1 Radioactive Liquid Waste Sampling And Analysis Program			
C:4.11-2 Radioactive Gaseous Waste Sampling And Analysis Program			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 82 of 103	
ATTACHMENT A Page 5 of 6 LIST OF ODCM TABLES			
C:3.12-1 Radiological Environmental Monitoring Program			
C:3.12-2 Reporting Levels For Radioactivity Concentrations In Environmental Samples			
C:4.12-1 Maximum Values For The Lower Limits Of Detection (LLD)			
<u>FORMAT FOR ANNUAL REPORT Included in Procedure 1/2-ODC-3.03</u>			
E:6.9-1 Environmental Radiological Monitoring Program Summary			
<u>ODCM CONTROLS PROCEDURE MATRIX Included in Procedure 1/2-ODC-1.01</u>			
F:1a	BV-1 Radiation Monitoring Instrumentation Surveillance		
F:1b	BV-2 Radiation Monitoring Instrumentation Surveillance		
F:2a	BV-1 Liquid Effluent Monitor Surveillances		
F:2b	BV-2 Liquid Effluent Monitor Surveillances		
F:3a	BV-1 Gaseous Effluent Monitor Surveillances		
F:3b	BV-2 Gaseous Effluent Monitor Surveillances		
F:4	BV-1 and 2 Liquid Effluent Concentration Surveillances		
F:5	BV-1 and 2 Liquid Effluent Dose Surveillances		
F:6	BV-1 and 2 Liquid Effluent Treatment Surveillances		
F:7	BV-1 and 2 Liquid Storage Tank Activity Limit Surveillances		
F:8	BV-1 and 2 Gaseous Effluent Dose Surveillances		
F:9	BV-1 and 2 Gaseous Effluent Air Dose Surveillances		
F:10	BV-1 and 2 Gaseous Effluent Particulate and Iodine Dose Surveillances		
F:11	BV-1 and 2 Gaseous Effluent Treatment Surveillances		
F:12a	BV-1 Gaseous Storage Tank Activity Limit Surveillances		
F:12a	BV-2 Gaseous Storage Tank Activity Limit Surveillances		
F:13	BV-1 and 2 Total Dose Surveillances		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 83 of 103	
<p style="text-align: center;">ATTACHMENT A Page 6 of 6 LIST OF ODCM TABLES</p> <p>F:14 BV-1 and 2 REMP Surveillances</p> <p>F:15 BV-1 and 2 Land Use Census Surveillances</p> <p>F:16 BV-1 and 2 Interlaboratory Comparison Program</p>			

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes	Unit: 1/2	Level Of Use: General Skill Reference	
	Revision: 21	Page Number: 84 of 103	
	ATTACHMENT B Page 1 of 1 LIST OF ODCM FIGURES		
<u>LIQUID EFFLUENTS Included in Procedure 1/2-ODC-2.01</u>			
1.4-1	BV-1 Liquid Radwaste System		
1.4-2	BV-2 Liquid Radwaste System		
1.4-3	BV-1 and 2 Liquid Effluent Release Points		
5-1	Site Boundary For Liquid Effluents		
<u>GASEOUS EFFLUENTS Included in Procedure 1/2-ODC-2.02</u>			
2.4-1	BV-1 and 2 Gaseous Radwaste System		
2.4-2	BV-1 and 2 Gaseous Effluent Release Points		
5-1	Site Boundary For Gaseous Effluents		
<u>RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM Included in Procedure 1/2-ODC-2.03</u>			
3.0-1	Air Sampling Locations		
3.0-2	TLD Locations		
3.0-3	Shoreline Sediment, Surface Water, And Drinking Water Sampling Locations		
3.0-4	Milk Sampling Locations		
3.0-5	Foodcrop Sampling Locations		
3.0-6	Fish Sampling Locations		

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 85 of 103

ATTACHMENT C
Page 1 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 RADIATION MONITORING INSTRUMENTATION SURVEILLANCES

TABLE F: 1a

1/2-ODC-3.03, Attachment D Control 3.3.3.1: Maintain Radiation Monitoring Channels in Table 3.3-6 OPERABLE

APPLICABILITY: MODES 1 thru 4

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.1	Test Monitors at Table 4.3-3 Frequency	
4.3.3.1.1	Noble Gas Effluent Monitors - PINGS	NOTE: Actions for INOPERABLE Monitors are documented in the Operations & Rad Effluent Shift Logs.
4.3.3.1.1.a	Supplementary Leak Collection and Release System (RM-1VS-110 CH7 & CH9)	1MSP-43.59-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check 1OST-43.7: Channel Operational Test
4.3.3.1.1.b	Auxiliary Building Ventilation System (RM-1VS-109 CH7 & CH9)	1MSP-43.60-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check 1OST-43.07: Channel Operational Test
4.3.3.1.1.c	Process Vent System (RM-1GW-109 CH7 & 9)	1MSP-43.58-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check 1OST-43.7: Channel Operational Test
4.3.3.1.2	Noble Gas Steam Effluent Monitors	NOTE: Actions for INOPERABLE Monitors are documented in the Operations & Rad Effluent Shift Logs.
4.3.3.1.2.ci v.1.2a	Atmospheric Steam Dump Valve and Code Safety Valve Discharge (RM-1MS-100A, B, C)	1MSP-43.62-I: RM-1MS-100A Channel Calibration 1MSP-43.63-I: RM-1MS-100B Channel Calibration 1MSP-43.64-I: RM-1MS-100C Channel Calibration Form 1/2-ADM-1611.F03: Channel Check 1OST-43.5: Channel Operational Test
4.3.3.1.2.b	Auxiliary Feedwater Pump Turbine Exhaust (RM-1MS-101)	1MSP-43.65-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check 1OST-43.5: Channel Operational Test

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 86 of 103

ATTACHMENT C

Page 2 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-2 RADIATION MONITORING INSTRUMENTATION SURVEILLANCES

TABLE F: 1b

1/2-ODC-3.03, Attachment D Control 3.3.3.1: Maintain Radiation Monitoring Channels in Table 3.3-6 OPERABLE

APPLICABILITY: MODES 1 thru 4

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.1	Test Monitors at Table 4.3-3 Frequency	
4.3.3.1.1	Noble Gas Effluent Monitors	NOTE: Actions for INOPERABLE Monitors are documented in the Operations & Rad Effluent Shift Logs.
4.3.3.1.2. c.i.1.1.a	Supplementary Leak Collection and Release System (2HVS-RQ109C & D)	2MSP-43.33-I: Channel Calibration Form 1/2-ADM-1611.F04: Channel Check 2OST-43.8: Channel Operational Test

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title:		Unit: 1/2	Level Of Use: General Skill Reference
ODCM: Index, Matrix and History of ODCM Changes		Revision: 21	Page Number: 87 of 103
<p align="center">ATTACHMENT C</p> <p align="center">Page 3 of 19</p> <p align="center">ODCM CONTROLS PROCEDURE MATRIX</p> <p align="center">BV-1 LIQUID EFFLUENT MONITOR SURVEILLANCES</p>			
<p>TABLE F: 2a</p> <p>1/2-ODC-3.03, Attachment E Control 3.3.3.9: Maintain Liquid Effluent Monitors in Table 3.3-12 OPERABLE</p> <p>APPLICABILITY: During Releases Through The Flow Path</p>			
ODCM SR	DESCRIPTION	PROCEDURE	
4.3.3.9	Test Monitors at Table 4.3-12 Frequency		
4.3.3.9.1	Monitors Providing Alarm and Automatic Termination	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs.	
4.3.3.9.1.a	Liquid Radwaste Effluent Line (RM-1LW-104)	1MSP-43.18-I: Channel Calibration Form 1/2-ENV-05.04.F01: Source Check 1/2OM-17.4A.D: Source Check 1OM-17.4.AK Source Check 1OST-43.9F: Channel Functional Test Form 1/2-ADM-1611.F03: Channel Check	
4.3.3.9.1.b	Liquid Waste Contaminated Drain Line (RM-1LW-116)	1MSP-43.23-I: Channel Calibration Form 1/2-ENV-05.04.F01: Source Check 1/2OM-17.4A.D: Source Check 1OST-43.9G: Channel Functional Test Form 1/2-ADM-1611.F03: Channel Check	
4.3.3.9.1.c	Auxiliary Feed Pump Bay Drain Monitor (RM-1DA-100)	1MSP-43.70-I: Channel Calibration 1OM-54.3 L5 Log: Source Check 1OST-43.9B: Channel Functional Test Form 1/2-ADM-1611.F03: Channel Check	
4.3.3.9.2	Monitors Providing Alarm, but Not Providing Auto Termination	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs.	
4.3.3.9.2.a	Component Cooling - Recirculation Spray Hx River Water Monitor (RM-1RW-100)	1MSP-43.10-I: Channel Calibration 1OST-43.9H: Channel Functional Test 1OST-43.9A: Source Check Form 1/2-ADM-1611.F03: Channel Check	
4.3.3.9.3	Flow Rate Measurement Devices	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.04	
4.3.3.9.3a,b	Liquid Radwaste Effluent Lines 3a: (FR-1LW-104 for RM-1LW-104) 3b: (FR-1LW-103 for RM-1LW-116)	1MSP-17.05-I: Channel Calibration (3b) 1MSP-17.06-I: F-LW-104-1 Channel Calibration (3a) 1MSP-17.07-I: F-LW-104-2 Channel Calibration (3a) 1MSP-17.08-I: F-LW-104-1 Channel Operational Test (3a) 1MSP-17.09-I: F-LW-104-2 Channel Operational Test (3a) 1MSP-17.10-I: F-LW-103 Channel Operational Test (3b) Form 1/2-ADM-1611.F03: Channel Check 1OM-54.3 L5 Log: FR-1LW-104 & FR-1LW-103 Channel Checks	
4.3.3.9.3.c	Cooling Tower Blowdown Line Pri: [FT-1CW-101-1] Alt: [FT-1CW-101] and [2CWS-FT101]	1MSP-31.04-I: FT-CW-101 Channel Calibration 1MSP-31.05-I: FT-CW-101 Channel Operational Test 1MSP-31.06-I: FT-CW-101-1 Channel Calibration 1MSP-31.07-I: FT-CW-101-1 Channel Operational Test 2MSP-31.04-I: 2CWS-FT101 Channel Calibration 2MSP-31.05-I: 2CWS-FT101 Channel Operational Test 1OM-54.3 L5 Log: FT-CW-101-1 & FT-CW-101 Channel Checks 2OM-54.3 L5 Log: 2CWS-FT101 Channel Check	
4.3.3.9.4	Tank Level Indicating Devices	NOTE: Actions for INOPERABLE monitors are documented in the Operations Shift Logs	
4.3.3.9.4.a	Primary Water Storage Tank (LI-1PG-115A for 1BR-TK-6A)	1MSP-8.01-I: L-PG115A Channel Operational Test 1MSP-8.03-I: L-PG115A Channel Calibration 1OM-54.3 L5 Log: Channel Check (When Adding to Tank)	
4.3.3.9.4.b	Primary Water Storage Tank (LI-1PG-115B for 1BR-TK-6B)	1MSP-8.02-I: L-PG-115B Channel Operational Test 1MSP-8.04-I: L-PG-115B Channel Calibration 1OM-54.3 L5 Log: Channel Check (When Adding to Tank)	
4.3.3.9.4.c	Steam Generator Drain Tank (LI-1LW-110 for 1LW-TK-7A)	1MSP-17.01-I: L-LW110 Channel Operational Test 1MSP-17.03-I: L-LW110 Channel Calibration 1OM-54.3 L5 Log: Channel Check (When Adding to Tank)	
4.3.3.9.4.d	Steam Generator Drain Tank (LI-1LW-111 for 1LW-TK-7B)	1MSP-17.02-I: L-LW111 Channel Operational Test 1MSP-17.04-I: L-LW111 Channel Calibration 1OM-54.3 L5 Log: Channel Check (When Adding to Tank)	

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 88 of 103

ATTACHMENT C
Page 4 of 19
ODCM CONTROLS PROCEDURE MATRIX
BV-2 LIQUID EFFLUENT MONITOR SURVEILLANCES

TABLE F: 2b

1/2-ODC-3.03, Attachment E Control 3.3.3.9: Maintain Liquid Effluent Monitors in Table 3.3-12 OPERABLE

APPLICABILITY: During Releases Through The Flow Paths

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.9	Test Monitors at Table 4.3-12 Frequency	
4.3.3.9.1	Monitors Providing Alarm and Automatic Termination	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs.
4.3.3.9.1.a	Liquid Waste Process Effluent Monitor (2SGC-RQ100)	Form 1/2-ADM-1611.F04: Channel Check Form 1/2-ENV-05.04.F01: Source Check 2MSP-43.39-I: Channel Calibration 1/2OM-17.4A.C: Source Check 2OM-25.4.L: Source Check 2OM-25.4.N: Source Check 2OST-43.3: Channel Functional Test
4.3.3.9.2	Flow Rate Measurement Devices	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.04
4.3.3.9.2.a	Liquid Radwaste Effluent (2SGC-FIS100)	2MSP-25.01-I: 2SGC-P26A,B Channel Calibration 2MSP-25.01-I: 2SGC-P26A,B Channel Operational Test 2MSP-43.39-I: Channel Calibration Form 1/2-ADM-1611.F04: Channel Check 2OM-54.3 L5 Log: Channel Check
4.3.3.9.2.b	Cooling Tower Blowdown Line Pri: [FT-1CW-101-1] Alt: [FT-1CW-101] and [2CWS-FT101]	1MSP-31.04-I: FT-CW-101 Channel Calibration 1MSP-31.05-I: FT-CW-101 Channel Operational Test 1MSP-31.06-I: FT-CW-101-1 Channel Calibration 1MSP-31.07-I: FT-CW-101-1 Channel Operational Test 2MSP-31.04-I: 2CWS-FT101 Channel Calibration 2MSP-31.05-I: 2CWS-FT101 Channel Operational Test 1OM-54.3 L5 Log: FT-CW-101-1 & FT-CW-101 Channel Checks 2OM-54.3 L5 Log: 2CWS-FT101 Channel Check

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 89 of 103

ATTACHMENT C

Page 5 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 GASEOUS EFFLUENT MONITOR SURVEILLANCES

TABLE F: 3a

1/2-ODC-3.03, Attachment F Control 3.3.3.10: Maintain Gaseous Effluent Monitors in Table 3.3-13 OPERABLE

APPLICABILITY: During Releases Through The Flow Paths

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.10	Test Monitors at Table 4.3-13 Frequency	
4.3.3.10.1	Gaseous Waste / Process Vent System	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.1.a	Noble Gas Activity Monitor Pri: (RM-1GW-108B) Alt: (RM-1GW-109 Ch 5): for continuous releases only, not an alternate for batch releases	1MSP-43.22-I: Channel Calibration 1OM-19.4.E, H: Channel Check (Batch Release) 1OM-19.4.E, H: Source Check 1/2-OM-19.4A.D: Source Check 1/2-OM-19.4A.D: Channel Check (Batch Release) 1OST-43.9D: Channel Functional Test 1OST-43.7A: RM-1GW-109 Channel Functional Test Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.1.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (RM-1GW-109) Alt: Filter Paper and Charcoal Cartridge for (RM-1GW-110)	Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.1.c	System Effluent Flow Rate Measuring Device Pri: (FR-1GW-108) Alt: (RM-1GW-109 Ch 10)	1MSP-19.05-I: Channel Operational Test 1MSP-19.06-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.1.d	Sampler Flow Rate Measuring Device Pri: (RM-1GW-109 Ch 15) Alt: (Rotometer: FM-1GW-101 and Vacuum Gauge: PI-1GW-135 for RM-1GW-110)	1MSP-43.21-I: Channel Calibration Form 1/2-ENV-01.04.F01: Channel Operational Test Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.2	Auxiliary Building Ventilation System (Ventilation Vent)	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.2.a	Noble Gas Activity Monitor Pri: (RM-1VS-101B) Alt: (RM-1VS-109 Ch 5)	1MSP-43.13-I: Channel Calibration 1OST-43.7A: RM-1VS-109 Channel Functional Test 1OST-43.9J: Channel Functional Test 1OST-43.9A: Source Check Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.2.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (RM-1VS-109) Alt: Filter Paper and Charcoal Cartridge for (RM-1VS-111)	Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.2.c	System Effluent Flow Rate Measuring Device Pri: (FR-1VS-101) Alt: (RM-1VS-109 Ch 10)	1MSP-44.07-I: Channel Operational Test 1MSP-44.08-I: Channel Calibration Form 1/2-ADM-1611.F03: Channel Check

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 90 of 103

ATTACHMENT C

Page 6 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 GASEOUS EFFLUENT MONITOR SURVEILLANCES

Continued

TABLE F: 3a

1/2-ODC-3.03, Attachment F Control 3.3.3.10: Maintain Gaseous Effluent Monitors in Table 3.3-13 OPERABLE

APPLICABILITY: During Releases Through The Flow Paths

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.10.2.d	Sampler Flow Rate Measuring Device Pri: (RM-1VS-109 Ch 15) Alt: (Rotometer: FM-1VS-102 and Vacuum Gauge: PI-1VS-659 for RM-1VS-111)	1MSP-44.07-I: Channel Functional Test 1MSP-44.08-I: Channel Calibration Form 1/2-ENV-01.04.F01 Channel Operational Test Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.3	Rx Containment / SLCRS (Elevated Release)	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.3.a	Noble Gas Activity Monitor Pri: (RM-1VS-107B) Alt: (RM-1VS-110 Ch 5)	1MSP-43.20-I: Channel Calibration 1OM-54.3 L5 Log: RM-1VS-107B Channel Check 1OST-43.7A: RM-1VS-110 Channel Functional Test 1OST-43.9L: Channel Functional Test 1OST-43.9A: Source Check Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.3.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (RM-1VS-110) Alt: Filter Paper and Charcoal Cartridge for (RM-1VS-112)	Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.3.c	System Effluent Flow Rate Measuring Device Pri: (FR-1VS-112) Alt: (RM-1VS-110 Ch 10)	1MSP-44.09-I: Channel Calibration 1MSP-44.10-I: Channel Operational Test Form 1/2-ADM-1611.F03: Channel Check
4.3.3.10.3.d	Sampler Flow Rate Measuring Device Pri: (RM-1VS-110 Ch 15) Alt: (Rotometer: FM-1VS-103 and Vacuum Gauge: PI-1VS-660 for RM-1VS-112)	1MSP-43.19-I: Channel Calibration Form 1/2-ENV-01.04.F01: Channel Operational Test Form 1/2-ADM-1611.F03: Channel Check

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 91 of 103

ATTACHMENT C
Page 7 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-2 GASEOUS EFFLUENT MONITOR SURVEILLANCES
Continued

TABLE F: 3b

1/2-ODC-3.03, Attachment F Control 3.3.3.10: Maintain Gaseous Effluent Monitors in Table 3.3-13 OPERABLE

APPLICABILITY: During Releases Through The Flow Paths

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.10	Test Monitors at Table 4.3-13 Frequency	
4.3.3.10.1	SLCRS Unfiltered Pathway (Ventilation Vent)	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.1.a	Noble Gas Activity Monitor Pri: (2HVS-RQ101B)	2MSP-43.36-I: Channel Calibration 2OST-43.9A: Channel Functional Test Form 1/2-ADM-1611.F04: Channel Check 2-HPP-4.02.018 Source Check (DRMS Auto Function)
4.3.3.10.1.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (2HVS-RQ101A)	Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.1.c	Process Flow Rate Monitor Pri: (Monitor Item 29 for 2HVS-VP101)	2MSP-43.36-I: Channel Calibration 2MSP-43.36A-I: Channel Operational Test Work Request: Channel Calibration (Velocity Probe) Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.1.d	Sampler Flow Rate Monitor Pri: (2HVS-FIT101-1)	2MSP-43.36-I: Channel Calibration 2MSP-43.36A-I: Channel Operational Test Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.2	SLCRS Filtered Pathway (Elevated Release)	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.2.a	Noble Gas Activity Monitor Pri: (2HVS-RQ109B)	2MSP-43.32-I: 2HVS-RQ109A Channel Calibration 2MSP-43.33-I: 2HVS-RQ109B,C,D Channel Calibration 2OST-43.8: Channel Functional Test Form 1/2-ADM-1611.F04: Channel Check 2-HPP-4.02.018 Source Check (DRMS Auto Function)
4.3.3.10.2.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (2HVS-RQ109A)	Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.2.c	Process Flow Rate Monitor Pri: (Monitor Item 29 for 2HVS-FR22) 1 st Alt: (2HVS-FI22A and FI22C) 2 nd Alt: (2HVS-FI22B and FI22D)	2MSP-43.32A-I: Channel Operational Test 2MSP-43.33-I: 2HVS-RQ109B,C,D, Channel Calibration Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.2.d	Sampler Flow Rate Monitor Pri: (Monitor Items 28 & 72 for 2HVS-DAU109A)	2MSP-43.32-I: 2HVS-RQ109A Channel Calibration 2MSP-43.32A-I: Channel Operational Test 2MSP-43.33-I: 2HVS-RQ109B,C,D, Channel Calibration Form 1/2-ADM-1611.F04: Channel Check

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 92 of 103

ATTACHMENT C
Page 8 of 19
ODCM CONTROLS PROCEDURE MATRIX
BV-2 GASEOUS EFFLUENT MONITOR SURVEILLANCES
Continued

TABLE F: 3b

1/2-ODC-3.03, Attachment F Control 3.3.3.10: Maintain Gaseous Effluent Monitors in Table 3.3-13 OPERABLE

APPLICABILITY: During Releases Through The Flow Paths

ODCM SR	DESCRIPTION	PROCEDURE
4.3.3.10.3	Decontamination Building Vent	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.3.a	Noble Gas Activity Monitor Pri: (2RMQ-RQ301B)	2MSP-43.35-I: Channel Calibration 2OST-43.9B: Channel Functional Test 2-HPP-4.02.018 Source Check (DRMS Auto Function) Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.3.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (2RMQ-RQ301A)	Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.3.d	Sampler Flow Rate Monitor Pri: (2RMQ-FIT301-1)	2MSP-43.35-I: Channel Calibration 2MSP-43.35A-I: Channel Operational Test Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.4	Condensate Polishing Building Vent	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.4.a	Noble Gas Activity Monitor Pri: (2HVL-RQ112B)	2MSP-43.38-I: Channel Calibration 2OST-43.9C: Channel Functional Test Form 1/2-ADM-1611.F04: Channel Check 2-HPP-4.02.018 Source Check (DRMS Auto Function)
4.3.3.10.4.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (2HVL-RQ112A)	Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.4.d	Sampler Flow Rate Monitor Pri: (2HVL-FIT112-1)	2MSP-43.38-I: Channel Calibration 2MSP-43.38A-I: Channel Operational Test Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.5	Waste Gas Storage Vault Vent	NOTE: Actions for INOPERABLE monitors are documented in the Operations & Rad Effluent Shift Logs and 1/2-ENV-05.05
4.3.3.10.5.a	Noble Gas Activity Monitor Pri: (2RMQ-RQ303B)	2MSP-43.37-I: Channel Calibration 2OST-43.9D: Channel Functional Test Form 1/2-ADM-1611.F04: Channel Check 2-HPP-4.02.018 Source Check (DRMS Auto Function)
4.3.3.10.5.b	Particulate & Iodine Sampler Pri: Filter Paper and Charcoal Cartridge for (2RMQ-RQ303A)	Form 1/2-ADM-1611.F04: Channel Check
4.3.3.10.5.d	Sampler Flow Rate Monitor Pri: (2RMQ-FIT303-1)	2MSP-43.37-I: Channel Calibration 2MSP-43.37A-I: Channel Operational Test Form 1/2-ADM-1611.F04: Channel Check

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 93 of 103

ATTACHMENT C

Page 9 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 LIQUID EFFLUENT CONCENTRATION SURVEILLANCES

TABLE F: 4

1/2-ODC-3.03, Attachment G Control 3.11.1.1: Maintain Effluent Concentration within 10 Times 10CFR20 EC's

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.1.1.1.A	Batch Waste Release Tanks: Sample and Analyze Radioactive Liquid Wastes per Table 4.11-1	1/2-CHM-ANA-5.3: LW Compositing Form 1/2-ADM-1611.F03 & F04: LW Tank Sampling, Form 1/2-HPP-3.06.001.F01: Activity Check Record Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.1.1.1.B	Continuous Releases: Sample and Analyze Radioactive Liquid Wastes per Table 4.11-1	Form 1/2-ADM-1611.F03 & F04: LW Tank Sampling, Form 1/2-HPP-3.06.001.F01: Activity Check Record Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.1.1.2	Use ODCM Methodology to Assure Compliance	Form 1/2-ENV-05.04.F01: RWDA-L 1/2OM-17.4A.D: RWDA-L
4.11.1.1.3	Take Turbine Building Grab Sample When BV-1 Primary to Secondary Leakage Exceeds 0.1 gpm (142 gpd)	Form 1/2-ADM-1611.F03 & F04: Sump Sampling, Form 1/2-HPP-3.06.001.F01: Activity Check Record Form 1/2-ENV-05.04.F01: RWDA-L Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.1.1.4	Obtain Turbine Building Grab Sample When BV-2 Primary to Secondary Leakage Exceeds 0.1 gpm (142 gpd)	Form 1/2-ADM-1611.F03 & F04: Sump Sampling, Form 1/2-HPP-3.06.001.F01: Activity Check Record Form 1/2-ENV-05.04.F01: RWDA-L Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.1.1.5	Obtain Grab Samples Prior to BV- 2 Recirculation Drain Pump Discharge to Catch Basin No. 16	Form 1/2-ADM-1611.F03 & F04: Sump Sampling, Form 1/2-HPP-3.06.001.F01: Activity Check Record 2OM-9.2: Rx Plant Vents and Drains (CB-16) 2OM-9.4F: Drain RSS Pump Casing / Pit 2OM 51: OM Clearance 51-86 (2DAS-P215A/B)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 94 of 103

ATTACHMENT C

Page 10 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 LIQUID EFFLUENT DOSE SURVEILLANCES

TABLE F: 5

1/2-ODC-3.03, Attachment H Control 3.11.1.2: Liquid Effluent Dose

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.1.2.1	Using the ODCM - Determine Cumulative Dose From Liquid Effluents Every 31 Days	Form 1/2-ENV-05.04.F01: RWDA-L SAP Order (Issue NPD3NRE Letter: Monthly Dose Projection) 1/2OM-17.4A.D: RWDA-L

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 95 of 103

ATTACHMENT C
Page 11 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 LIQUID EFFLUENT TREATMENT SURVEILLANCES

TABLE F: 6

1/2-ODC-3.03, Attachment I Control 3.11.1.3: Liquid Effluent Treatment System

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.1.3.1	Using the ODCM - Project the Liquid Release Dose Every 31 Days	Form 1/2-ENV-05.04.F01: RWDA-L SAP Order (Issue NPD3NRE Letter: Monthly Dose Projection) 1/2OM-17.4A.D: RWDA-L

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 96 of 103

ATTACHMENT C
Page 12 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 LIQUID STORAGE TANK ACTIVITY LIMIT SURVEILLANCES

TABLE F: 7

1/2-ODC-3.03, Attachment J Control 3.11.1.4: Maintain Liquid Tank Activity within the following limits:

≤18 Curies in Unit 1 Primary Grade Water Storage Tank [1BR-TK-6A]
 ≤18 Curies in Unit 1 Primary Grade Water Storage Tank [1BR-TK-6B]
 ≤7 Curies in Unit 1 Steam Generator Drain Tank [1LW-TK-7A]
 ≤7 Curies in Unit 1 Steam Generator Drain Tank [1LW-TK-7B]
 ≤6 Curies in Unit 1 Refueling Water Storage Tank [1QS-TK-1]
 ≤62 Curies in Unit 2 Refueling Water Storage Tank [2QSS-TK21]
 ≤10 Curies in Unit 1 and Unit 2 miscellaneous temporary outside radioactive liquid storage tanks.

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.1.4.1	Every 7 days Analyze a tank sample when radioactive material is added to tanks except the RWST's. For RWST's, analyze sample within 7 days of reactor cavity drain down back to the RWST.	Form 1/2-HPP-3.06.001.F01: Activity Check Record Form 1/2-ENV-05.04.F01: RWDA-L 1OM-8.4.Z: Recirculate Test Tanks Thru Ion Exchanger 1OM-17.4.AJ: LW Transfer to 1LW-TK-7A&B 1OM-54.3 L5 Log Item 197: 1OM-54.3 L5 Log Item 132: 1OM-54.3 L5 Log Item 134: 1OM-54.3 L5 Log Item 200: 2OM-17.4B: LW to SG Blowdown Tank

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 97 of 103

ATTACHMENT C
Page 13 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 GASEOUS EFFLUENT DOSE SURVEILLANCES

TABLE F: 8

1/2-ODC-3.03, Attachment K Control 3.11.2.1: Gaseous Effluent Dose Rates

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.1.1	Using the ODCM - Determine the Noble Gas Effluent Dose Rate	Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-3.06.012.F01: Abnormal Gaseous Releases 1OM-19.4E, H: RWDA-G for Unit 1 GWDT's 1/2OM-19.4A.B: RWDA-G for Unit 2 GWST's
4.11.2.1.2	Sample and Analyze per Table 4.11-2 to Determine Inhalation Pathway Dose	
4.11.2.1.2.A	Waste Gas Storage Tank - Grab Sample Each Tank	Form 1/2-ADM-1611.F03 & F04: GW Tank Sampling Form 1/2-HPP-3.06.003.F01: GW Tank Sampling Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.2.1.2.B	Containment Purge - Grab Sample Each Purge	Form 1/2-ADM-1611.F03 & F04: GW Tank Sampling Form 1/2-ENV-05.05.F01: RWDA-G Form NOP-OP-4702-01: Air Sample Record Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling
4.11.2.1.2.C	Ventilation Systems	
4.11.2.1.2.C.1 thru 4.11.2.1.C.3 and 4.11.2.1.2.D.1 thru 4.11.2.1.2.D.3	BV-1 Grab and Continuous Samples	Form 1/2-ADM-1611.F03 & F04: GW Tank Sampling Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling Form 1/2-HPP-4.02.017.F01-90: RMS & DRMS Valve Verification 1-HPP-5.01.001: SA-9/10 Emergency Operation 1-HPP-5.01.002: PING-4 Emergency Operation
4.11.2.1.2.C.4 thru 4.11.2.1.2.C.8 and 4.11.2.1.2.D.4 thru 4.11.2.1.2.D.8	BV-2 Grab and Continuous Samples	Form 1/2-ADM-1611.F03 & F04: GW Tank Sampling Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling Form 1/2-HPP-4.02.017.F01-90: RMS & DRMS Valve Verification 2-HPP-5.04.001: Emergency Operation of WRGM Assembly

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 98 of 103

ATTACHMENT C
Page 14 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 GASEOUS EFFLUENT AIR DOSE SURVEILLANCES

TABLE F: 9

1/2-ODC-3.03, Attachment L Control 3.11.2.2: Gaseous Effluent Air Doses

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.2.1	Using the ODCM - Determine the Noble Gas Cumulative Dose Contributions Every 31 Days	Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-3.06.012.F01: Abnormal Gaseous Releases Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling SAP Order (Issue NPD3NRE Letter: Monthly Dose Projection)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 99 of 103

ATTACHMENT C

Page 15 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 GASEOUS EFFLUENT PARTICULATE AND IODINE DOSE SURVEILLANCES

TABLE F: 10

1/2-ODC-3.03, Attachment M Control 3.11.2.3: Gaseous Effluent Particulate And Iodine Doses

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.3.1	Using the ODCM - Determine the Particulate & Radioiodine Cumulative Dose Contributions Every 31 Days	Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-3.06.012.F01: Abnormal Gaseous Releases Form 1/2-HPP-4.02.002.F02: Rad Monitor Sampling SAP Order (Issue NPD3NRE Letter: Monthly Dose Projection)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 100 of 103

ATTACHMENT C
Page 16 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 GASEOUS EFFLUENT TREATMENT SURVEILLANCES

TABLE F: 11

1/2-ODC-3.03, Attachment N Control 3.11.2.4: Gaseous Effluent Treatment System

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.4.1	Using the ODCM - Project the Gas Release Dose from the Site Every 31 Days	Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-3.06.012.F01: Abnormal Gaseous Releases SAP Order (Issue NPD3NRE Letter: Monthly Dose Projection)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 101 of 103

ATTACHMENT C

Page 17 of 19

ODCM CONTROLS PROCEDURE MATRIX

BV-1 GASEOUS STORAGE TANK ACTIVITY LIMIT SURVEILLANCES

TABLE F: 12a

1/2-ODC-3.03, Attachment O Control 3.11.2.5: Maintain Gas Storage Tank Activity within the following limits:

1GW-TK-1A: ≤52000 Curies Noble Gas (Considered Xe-133)

1GW-TK-1B: ≤52000 Curies Noble Gas (Considered Xe-133)

1GW-TK-1B: ≤52000 Curies Noble Gas (Considered Xe-133)

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.5.1	Determine Tank Gas Contents when Adding Rad Material & (RCS Activity >100uCi/ml)	Form 1/2-HPP-3.06.003.F01: GW Tank Sampling 1OM-19.4.G: GW Disposal System

BV-2 GASEOUS STORAGE TANK ACTIVITY LIMIT SURVEILLANCES

TABLE F: 12b

1/2-ODC-3.03, Attachment O Control 3.11.2.5: Maintain Gas Storage Tank Activity with the following limit:

2GWS-TK25A thru 25G: ≤19000 Curies Noble Gas (Considered Xe-133) in any connected group of Gas Storage Tanks

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.2.5.1	Determine Gaseous Waste Tank Rad Material When Adding Rad Material to the Tank.	Form 1/2-HPP-3.06.003.F01: GW Tank Sampling 2OM-19.2: GW Precautions & Limitations 2OM-19.4G: GW transfer from Unit 2 2OM-54.3 L5 Log Item 133

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 102 of 103

ATTACHMENT C
Page 18 of 19
ODCM CONTROLS PROCEDURE MATRIX
BV-1 AND 2 TOTAL DOSE SURVEILLANCES

TABLE F: 13

1/2-ODC-3.03, Attachment P Control 3.11.4.1: Liquid And Gaseous Doses

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.11.4.1.1	Using the ODCM - Determine Cumulative Gas & Liquid Dose per Control 3.11.1.2, 3.11.2.2, 3.11.2.3	Form 1/2-ENV-01.05.F01: Annual RETS Report (40CFR190) Form 1/2-ENV-05.04.F01: RWDA-L Form 1/2-ENV-05.05.F01: RWDA-G Form 1/2-ENV-01.03.F01: Continuous Release Permit Form 1/2-HPP-3.06.012.F01: Abnormal Gaseous Releases 1/2-ENV-01.04: Effluent Data Logs (40CFR190)

Beaver Valley Power Station		Procedure Number: 1/2-ODC-1.01	
Title: ODCM: Index, Matrix and History of ODCM Changes		Unit: 1/2	Level Of Use: General Skill Reference
		Revision: 21	Page Number: 103 of 103

ATTACHMENT C
Page 19 of 19
ODCM CONTROLS PROCEDURE MATRIX

BV-1 AND 2 REMP PROGRAM SURVEILLANCES

TABLE F: 14

1/2-ODC-3.03, Attachment Q Control 3.12.1: Radiological Environmental Monitoring Program (REMP)

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.12.1.1	Using Locations in the ODCM -Collect and Analyze Samples per Tables 3.12-1, 3.12-2 & 4.12-1	1/2-ENV-02.01: Radiological Environmental Monitoring Program 1/2-ENV-03.01: Environmental Sampling

TABLE F: 15

1/2-ODC-3.03, Attachment R Control 3.12.2: Land Use Census

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.12.2.1	Using the Best Available Method - Conduct a Land Use Census Yearly Between 6/1 & 10/1	1/2-ENV-02.01: Radiological Environmental Monitoring Program 1/2-ENV-04.02: REMP Calculations

TABLE F: 16

1/2-ODC-3.03, Attachment S Control 3.12.3: Interlaboratory Comparison Program

APPLICABILITY: At All Times

ODCM SR	DESCRIPTION	PROCEDURE
4.12.3.1	Include Analysis Results of the Interlaboratory Comparison Program in the Annual Radiological Environmental Report	1/2-ENV-02.01: Radiological Environmental Monitoring Program Split Sample Program with PA-DEP Spike Sample Program with Independent Laboratory 1/2-ENV-01.05: Section 4 of AREOR Template