

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8608050189 DOC. DATE: 86/07/29 NOTARIZED: NO DOCKET #
 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Power 05000397
 AUTH. NAME AUTHOR AFFILIATION
 SORESEN, G. C. Washington Public Power Supply System
 RECIP. NAME RECIPIENT AFFILIATION
 ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Responds to IE Bulletin 86-002 re static "O" ring (SDR)
 differential pressure switches. Four SDR switches utilized at
 plant. Addl response will be submitted within 30 to 60 days
 of receipt of test assembly.

DISTRIBUTION CODE: IE11D COPIES RECEIVED: LTR 1 ENCL 0 SIZE: 3
 TITLE: Bulletin Response (50 DKT)

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	BWR PD3 LA	1	BWR PD3 PD	1
	BRADFUTE, J	1		
INTERNAL:	ACRS WYLIE	1	AEOD	1
	AEOD/PTB	1	IE FILE 01	1
	IE/DEPER/EGCB	1	IE/DEPER/EGCB/S	2
	NRR BWR ADTS	1	NRR JOYCE, J	1
	NRR PWR-A ADTS	1	NRR PWR-B ADTS	1
	NRR/DSRO/EIB	1	NRR/DSRO/RSIB	1
	NRR/DRAS	1		
EXTERNAL:	LPDR	1	NRC PDR	1
	NSIC	1		

ADD: Original To: Reg Files

TOTAL NUMBER OF COPIES REQUIRED: LTTR 21 ENCL 0

A/01

[illegible]

65
11
2
.

1
(2)
3
4
5
6

4 10 3

89

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

17

1

1

100

Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

8608050189 860729
PDR ADOCK 05000397
Q PDR

July 29, 1986
G02-86-698

Docket No. 50-397

Director of Nuclear Reactor Regulation
Attn: Ms. E. G. Adensam, Project Director
BWR Project Directorate No. 3
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

Subject: NUCLEAR PLANT NO. 2
IE BULLETIN 86-02, STATIC "O" RING DIFFERENTIAL
PRESSURE SWITCHES SPECIAL OPERABILITY TESTING
SCHEDULE

- References:
- 1) IEB 86-02, "Static 'O' Ring Differential Pressure Switches", dated July 18, 1986
 - 2) Letter, G02-86-696, G. C. Sorensen (SS) to J. B. Martin (NRC RV), "IEB 86-02, Static 'O' Ring Differential Pressure Switches, Seven (7) Day Response", dated July 29, 1986

Reference 1) requested that licensees determine whether or not Series 102 or 103 Static "O" Ring (SOR) differential pressure switches are utilized in electrical equipment important to safety and, if so, to complete certain actions to assure that system operation is reliable.

Reference 2) confirmed that four Series 103 SOR differential pressure switches are utilized at WNP-2 and provided information describing the reliability observed to date (no significant setpoint inconsistency), additional vendor test results reflecting component reliability (each of the four devices showed insignificant setpoint shift when tested at 10, 300, and 1500 psig by SOR), and the testing schedule implemented at WNP-2 to provide greater assurance of total system operation (monthly tests for each device on a weekly rotation).

Reference 1) required that a special test simulating operating conditions be conducted within 30 days to verify proper operation of the device and system function. The Supply System has reviewed the implications of conducting the test within 30 days and has the following concerns:

IEB
10
Add:
original
To: Reg Files

[illegible]

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in the YEA medium for 24 h at 28°C. The cell concentration of the strains was adjusted to 10⁸ cells/ml. The cell suspension was mixed with the plant tissue and the transformation efficiency was determined. The results were expressed as the mean ± SD of three independent experiments. The asterisks indicate the significant difference between the strains.

E. G. Adensam

Page Two

July 29, 1986

IEB 86-02, STATIC "O" RING DIFFERENTIAL PRESSURE SWITCHES

- o Testing at system operating pressure presents the possibility of degrading the equipment. The test could inadvertently apply a differential pressure equivalent to system operating pressure to the device. To avoid such an event, the Supply System considers it prudent to approach the test deliberately with appropriately designed and fabricated testing equipment and procedures. The required 30 day interval precludes the use of this approach to the test and imposes an accelerated schedule to devise test equipment, procedures, and actually conduct the test. The imposed schedule appears over reactive in light of the differences in application of the devices at WNP-2 as compared to that described in the Bulletin.

The four WNP-2 SOR switches are utilized for level 2 containment isolation actuation and not RPS or ECCS actuation purposes as described in the Bulletin. As stated in Reference 2), the licensed operators have been advised of what control room indications would indicate switch failure and the necessary actions to accomplish. It should be noted that RPS and ECCS actuations would have already occurred due to trips on other instruments; hence, the threat of a similar event as that described by the Bulletin is non-existent.

- o The test assembly for conducting this test should be traceable to National Bureau Standards (NBS). Reliance on trip setpoints resulting from a test device not having traceability to NBS is contrary to sound engineering and operating principles and does not conform to guidance provided in IEEE Standard 498, "Requirements for the Calibration and Control of Measuring and Test Equipment used in the Construction and Maintenance of Nuclear Power Generating Stations". The Supply System has investigated the availability of an NBS traceable test assembly and been informed that delivery can be made within 45 days of order placement. The Supply System is in the process of placing such an order at present. Obviously, the 30 day test requirement can not be supported with NBS traceable equipment.

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637

E. G. Adensam

Page Three

July 29, 1986

IEB 86-02, STATIC "O" RING DIFFERENTIAL PRESSURE SWITCHES

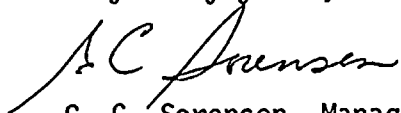
As a result of the above two concerns, the Supply System proposes to meet the 30 and 60 day reporting requirements of the Bulletin within 30 and 60 days of receipt of the test assembly, traceable to NBS, which is presently being procured.

In the interim, the Supply System is taking compensatory measures. For one thing, the plant licensed operators have been informed via a Special Operations Bulletin (SOB) of 1) the potential malfunction of the four SOR switches, 2) the desired methods of verifying proper containment isolations during a level transient and 3) the potential need to initiate operator actions to ensure the proper isolations. Further, this Bulletin (SOB) will be included in a near-term Maintenance and Operations Bulletin (MOB) with an explanation of the future augmented testing of the SOR differential pressure switches at system operating conditions. This Bulletin should become part of the formal requalification training program cycle beginning about August 11, 1986.

Additionally, the Surveillance Procedures on SOR differential pressure switches have been rewritten so that one channel is covered in each procedure. This will allow one channel to be tested each week, on a monthly staggered basis. While this does not constitute an increase in the actual number of surveillance tests being performed, it does increase the likelihood of any potential problem being discovered and responded to earlier than under the old surveillance schedule. Greater diversity with respect to test equipment/personnel will also be accomplished by this change.

Your immediate attention to this response is requested. Should you have any questions or require further information, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,



G. C. Sorensen, Manager
Regulatory Programs

PLP/tmh

cc: JO Bradfute - NRC
JB Martin - NRC RV
E Revell - BPA
NS Reynolds - BLCP&R
NRC Site Inspector

