

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

WATER APPROPRIATION AND USE PERMIT

PERMIT NUMBER: GA92S009(03)

EFFECTIVE DATE: MAY 12, 2000

EXPIRATION DATE: JANUARY 1, 2006

FIRST APPROPRIATION: JANUARY 1, 1925



RELIANT ENERGY MARYLAND HOLDINGS, LLC

HEREINAFTER REFERRED TO AS THE "PERMITTEE", IS AUTHORIZED BY THE WATER MANAGEMENT ADMINISTRATION, HEREINAFTER REFERRED TO AS THE "ADMINISTRATION" PURSUANT TO THE PROVISIONS OF TITLE 5 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND (1996 REPLACEMENT VOLUME) AS AMENDED, TO APPROPRIATE AND USE WATERS OF THE STATE SUBJECT TO THE FOLLOWING CONDITIONS:

1. ALLOCATION - THE WATER WITHDRAWAL GRANTED BY THIS PERMIT IS LIMITED TO:
A DAILY AVERAGE OF 94,000,000 GALLONS ON A YEARLY BASIS AND A MAXIMUM DAILY WITHDRAWAL OF 420,000,000 GALLONS.
2. USE - THE WATER IS TO BE USED FOR HYDROELECTRIC GENERATION, TEMPERATURE ENHANCEMENT, WHITEWATER BOATING ENHANCEMENT, AND MAINTENANCE OF MINIMUM FLOWS IN THE YOUGHIOGHENY RIVER.
3. SOURCE - THE WATER SHALL BE TAKEN FROM DEEP CREEK LAKE.
4. LOCATION - THE POINT(S) OF WITHDRAWAL SHALL BE LOCATED AT THE EXISTING INTAKE STRUCTURE AT THE DEEP CREEK LAKE DAM, THREE MILES WEST OF THAYERVILLE, GARRETT COUNTY, MARYLAND.

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5. RIGHT OF ENTRY - THE PERMITTEE SHALL ALLOW AUTHORIZED REPRESENTATIVES OF THE ADMINISTRATION ACCESS TO THE PERMITTEE'S FACILITY TO CONDUCT INSPECTIONS AND EVALUATIONS NECESSARY TO ASSURE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT. THE PERMITTEE SHALL PROVIDE SUCH ASSISTANCE AS MAY BE NECESSARY TO EFFECTIVELY AND SAFELY CONDUCT SUCH INSPECTIONS AND EVALUATIONS.
6. PERMIT REVIEW - THE PERMITTEE WILL BE QUERIED EVERY THREE YEARS (TRIENNIAL REVIEW) REGARDING WATER USE UNDER THE TERMS AND CONDITIONS OF THIS PERMIT. FAILURE TO RETURN THE TRIENNIAL REVIEW QUERY WILL RESULT IN SUSPENSION OR REVOCATION OF THIS PERMIT.
7. PERMIT RENEWAL - THIS PERMIT WILL EXPIRE ON THE DATE INDICATED ON THE FIRST PAGE OF THIS PERMIT. IN ORDER TO RENEW THE PERMIT THE PERMITTEE SHALL FILE A RENEWAL APPLICATION WITH THE ADMINISTRATION NO LATER THAN 45 DAYS PRIOR TO THE EXPIRATION.
8. PERMIT SUSPENSION OR REVOCATION - THIS PERMIT MAY BE SUSPENDED OR REVOKED BY THE ADMINISTRATION UPON VIOLATION OF THE CONDITIONS OF THIS PERMIT, OR UPON VIOLATION OF ANY REGULATION PROMULGATED PURSUANT TO TITLE 5 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND (1996 REPLACEMENT VOLUME) AS AMENDED.
9. CHANGE OF OPERATIONS - ANY ANTICIPATED CHANGE IN APPROPRIATION WHICH MAY RESULT IN A NEW OR DIFFERENT USE, QUANTITY, SOURCE, OR PLACE OF USE OF WATER SHALL BE REPORTED TO THE ADMINISTRATION BY THE PERMITTEE BY SUBMISSION OF A NEW APPLICATION.
10. ADDITIONAL PERMIT CONDITIONS - THE ADMINISTRATION MAY AT ANYTIME (INCLUDING TRIENNIAL PERMIT REVIEW OR WHEN A CHANGE APPLICATION IS SUBMITTED) REVISE ANY CONDITION OF THIS PERMIT OR ADD ADDITIONAL CONDITIONS CONCERNING THE CHARACTER, AMOUNT, MEANS AND MANNER OF THE APPROPRIATION OR USE, WHICH MAY BE NECESSARY TO PROPERLY PROTECT, CONTROL AND MANAGE THE WATER RESOURCES OF THE STATE. CONDITION REVISIONS AND ADDITIONS WILL BE ACCOMPLISHED BY ISSUANCE OF A REVISED PERMIT.

11. NON-TRANSFERRABLE - THIS PERMIT IS NON-TRANSFERRABLE. A NEW OWNER MAY ACQUIRE AUTHORIZATION TO CONTINUE THIS APPROPRIATION BY FILING A NEW APPLICATION WITH THE ADMINISTRATION. AUTHORIZATION WILL BE ACCOMPLISHED BY ISSUANCE OF A NEW PERMIT.
12. FLOW MEASUREMENT - THE PERMITTEE SHALL ESTIMATE THE QUANTITY OF WATER RELEASED UNDER THIS PERMIT BY A METHOD WHICH SHALL BE APPROVED BY THE ADMINISTRATION. THE PERMITTEE SHALL MAINTAIN A DAILY LOG, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.
13. WITHDRAWAL REPORTS - THE PERMITTEE SHALL SUBMIT TO THE ADMINISTRATION, SEMI-ANNUALLY (JULY-DECEMBER, NO LATER THAN JANUARY 31 AND JANUARY-JUNE, NOT LATER THAN JULY 31), WATER USE RECORDS. THESE RECORDS SHALL SHOW THE TOTAL ESTIMATED QUANTITY OF WATER RELEASED EACH MONTH UNDER THIS PERMIT.
14. RULE BAND AND OPERATION PROTOCOLS - THE PERMITTEE SHALL OPERATE THE DEEP CREEK HYDROELECTRIC PROJECT (PROJECT) ACCORDING TO THE PROJECT OPERATING RULES SPECIFIED THROUGHOUT THIS PERMIT SUCH THAT WATER ELEVATIONS IN DEEP CREEK LAKE ARE MAINTAINED WITHIN THE OPERATING RULE BAND, EXCEPT IN THE EVENT OF UNUSUAL OR EMERGENCY CONDITIONS AS DEFINED BELOW. THE UPPER AND LOWER RULE BANDS ARE THE HIGHEST AND LOWEST DESIRABLE RESERVOIR LEVELS AT THE END OF EACH MONTH. THE UPPER AND LOWER RULE BANDS FOR THE END OF EACH MONTH ARE DEFINED IN THE FOLLOWING TABLE. WHEN LAKE LEVELS ARE ABOVE THE UPPER RULE BAND, THE PERMITTEE MAY RELEASE WATER AS NEEDED TO DRAW DOWN THE LAKE TO A LEVEL WITHIN THE RULE BAND. ELEVATIONS ARE GIVEN IN FEET ABOVE MEAN SEA LEVEL.

MONTH	<u>PROJECT OPERATING RULE BAND</u>	
	<u>UPPER BAND ELEVATIONS</u>	<u>LOWER BAND ELEVATIONS</u>
JANUARY	2457.9	2455.0
FEBRUARY	2457.9	2456.0
MARCH	2459.5	2458.0
APRIL	2461.0	2459.6
MAY	2461.0	2460.0
JUNE	2461.0	2460.0
JULY	2460.0	2459.0
AUGUST	2459.0	2458.0
SEPTEMBER	2458.5	2457.0
OCTOBER	2457.9	2456.0
NOVEMBER	2457.9	2455.0
DECEMBER	2457.9	2455.0

14. (cont)

IN THE EVENT OF UNUSUAL OR EMERGENCY CONDITIONS, THE NORMAL MONTHLY OPERATING RULES MAY BE MODIFIED OR SUSPENDED UNTIL SUCH TIME AS UNUSUAL OR EMERGENCY CONDITIONS NO LONGER EXIST. UNUSUAL OR EMERGENCY CONDITIONS ARE DEFINED AS:

- (A) A SYSTEM EMERGENCY, DEFINED AS MAXIMUM EMERGENCY GENERATION UNDER THE PENNSYLVANIA-NEW JERSEY-MARYLAND INTERCONNECTION (PJM) HIERARCHY OF EMERGENCY ORDERS, OR EMERGENCY LOADING OF SPINNING RESERVE CAPACITY, OR EMERGENCY CONTROL OF TRANSMISSION FACILITY LOADING;
- (B) A SITE EMERGENCY SUCH AS FAILURE OR PROBABLE FAILURE OF THE DAM THAT REQUIRES MAXIMUM RELEASE FOR RAPID DRAWDOWN OF THE RESERVOIR;
- (C) A SITE EMERGENCY OR OTHER FORCED (UNSCHEDULED) OUTAGE REQUIRING SHUTDOWN OF THE INTAKE, POWER TUNNEL, PENSTOCKS, OR GENERATING UNITS, RESULTING IN THE INABILITY TO GENERATE OR TO OPERATE THE PROPOSED MINIMUM RELEASE BYPASS;
- (D) MAINTENANCE OF THE DAM OR REPAIR OF LAKE SHORELINE EROSION WHICH REQUIRES LOWERING OF LAKE LEVEL BELOW THE LOWER RULE BAND TO ALLOW ACCESS OR TO CONTROL INFLOW;
- (E) ACTUAL OR FORECAST EXTRAORDINARILY HIGH RUNOFF OR RAINFALL WHICH REQUIRES UNLIMITED GENERATION IN ORDER TO KEEP THE LAKE LEVEL BELOW THE UPPER RULE BAND AND/OR AVOID SPILLING OVER THE TOP OF THE DAM.

THE DURATION AND TIMING OF PLANNED OUTAGES SHALL BE APPROVED IN ADVANCE BY THE ADMINISTRATION. IN PROPOSING PLANNED OUTAGES, THE PERMITTEE SHALL DETAIL REASONS WHY THE OUTAGE IS NECESSARY AS WELL AS HOW THE OUTAGE WILL IMPACT THE FISHERY AND WHITEWATER RECREATION IN THE YOUGHIOGHENY RIVER. TO THE EXTENT POSSIBLE, PLANNED OUTAGES SHALL NOT OCCUR DURING MID-APRIL THROUGH MID-OCTOBER.

15. LAKE LEVEL MONITORING AND REPORTING - THE PERMITTEE SHALL MEASURE AND RECORD THE WATER ELEVATIONS IN DEEP CREEK LAKE AT APPROXIMATELY THE SAME TIME EACH DAY. THE PERMITTEE SHALL REPORT THE RESULTS OF WATER-LEVEL MONITORING TO THE ADMINISTRATION ON AN ANNUAL BASIS, AND SHALL MAINTAIN A DAILY LOG OF MEASUREMENTS, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.

16. TEMPERATURE ENHANCEMENT IN THE YOUGHIOGHENY RIVER - THE PERMITTEE SHALL IMPLEMENT A PLAN APPROVED BY THE ADMINISTRATION FOR USING PROJECT OPERATION, OR A COMBINATION OF MINIMUM FLOW RELEASES AND PROJECT OPERATION, TO MAINTAIN WATER TEMPERATURES LESS THAN 25 DEGREES C IN THE YOUGHIOGHENY RIVER BETWEEN THE PROJECT TAILRACE AND SANG RUN, DURING THE MONTHS OF JUNE, JULY AND AUGUST. THE PLAN MUST INCLUDE A TRIGGERING MECHANISM AND REAL-TIME MONITORING OF RIVER TEMPERATURE. THE PLAN MUST INCLUDE A PROTOCOL FOR PREDICTING TEMPERATURE RELEASES ON THE MORNING OF THE RELEASE, AS EARLY AS THREE HOURS IN ADVANCE. THE PERMITTEE SHALL REPORT TO THE DEPARTMENT ALL OCCURRENCES OF WATER TEMPERATURES EQUALING OR EXCEEDING 25 DEGREES C WITHIN 30 DAYS OF THE DATE OF OCCURRENCE, INCLUDING PROPOSED MEASURES OR CHANGES TO THE PLAN TO PRECLUDE FUTURE INCIDENTS WHERE WATER TEMPERATURE EQUALS OR EXCEEDS 25 DEGREES C. THE PERMITTEE SHALL INCLUDE THE RESULTS OF TEMPERATURE MONITORING IN AN ANNUAL REPORT. THE PERMITTEE SHALL, IN CONSULTATION WITH THE DEPARTMENT, CONTINUE TO REFINE OR REVISE THE PLAN WITH THE OBJECTIVE OF MAINTAINING WATER TEMPERATURES IN THE RIVER BETWEEN THE PROJECT TAILRACE AND SANG RUN BELOW 25 DEGREES C AT ALL TIMES DURING THE MONTHS OF JUNE, JULY AND AUGUST.

17. MINIMUM FLOW RELEASES - THE PERMITTEE SHALL MAINTAIN AND OPERATE A BYPASS SYSTEM AT THE PROJECT TO MAINTAIN A MINIMUM FLOW OF 40 CFS IN THE YOUGHIOGHNEY RIVER DOWNSTREAM OF THE PROJECT TAILRACE. THE MINIMUM FLOW SHALL BE MAINTAINED AT ALL TIMES BELOW THE TAILRACE. A REDUCTION IN THE MINIMUM FLOW BELOW 40 CFS MAY BE REQUESTED OF THE ADMINISTRATION WHEN RESERVOIR LEVELS ARE ONE FOOT OR MORE BELOW THE LOWER RULE BAND. THE PERMITTEE SHALL ESTIMATE FLOW IN THE YOUGHIOGHNEY RIVER IMMEDIATELY BELOW THE TAILRACE AT APPROXIMATELY THE SAME TIME EACH DAY. A REPORT OF FLOW ESTIMATES AND THE OCCURRENCE OF BYPASS RELEASES SHALL BE SUBMITTED TO THE DEPARTMENT IN AN ANNUAL REPORT, AND A DAILY LOG OF SUCH RELEASES SHALL BE MAINTAINED, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.

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18. DISSOLVED OXYGEN MITIGATION - THE PERMITTEE SHALL MAINTAIN AND OPERATE A TAILRACE WEIR DESIGNED TO INCREASE DISSOLVED OXYGEN LEVELS IN ALL PROJECT DISCHARGES ABOVE MARYLAND WATER QUALITY STANDARDS AS OUTLINED IN COMAR 26.08.02 (5 PPM MINIMUM, 6 PPM DAILY AVERAGE). THE PERMITTEE SHALL MONITOR DISSOLVED OXYGEN LEVELS OF PROJECT DISCHARGES BY A METHOD APPROVED BY THE ADMINISTRATION DURING JUNE 1 TO OCTOBER 1. THE RESULTS OF DISSOLVED OXYGEN MONITORING SHALL BE SUBMITTED TO THE DEPARTMENT IN AN ANNUAL REPORT. THE PERMITTEE SHALL MAINTAIN A LOG OF MEASUREMENTS, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.
19. RELEASES FOR WHITE WATER RECREATION - PURSUANT TO THE PROJECT OPERATING RULES AS SPECIFIED BELOW AND SUBJECT TO OTHER OPERATING RULES SPECIFIED IN THE PERMIT, THE PERMITTEE SHALL OPERATE THE PROJECT TO ENHANCE WHITEWATER BOATING OPPORTUNITIES IN THE YOUGHIOGHENY RIVER BETWEEN THE PROJECT TAILRACE AND FRIENDSVILLE. ENHANCEMENT CONSIDERATIONS SHALL INCLUDE FRIDAY, MONDAY AND SATURDAY RELEASES; 48 HOURS ADVANCE NOTICE OF NORMAL RELEASES; REDUCED OR NON-GENERATION RELEASES WHEN NATURAL FLOWS ARE NAVIGABLE; AND REDUCTION OF GENERATION WHEN RELEASES ARE NOT USABLE FOR WHITEWATER RECREATION.

THE FOLLOWING OPERATING RULES SHALL BE IN EFFECT DURING THE PERIOD FROM APRIL 15 THROUGH OCTOBER 15.

THE PERMITTEE SHALL NOT OPERATE THE PROJECT FOR HYDROELECTRIC GENERATION BEFORE 1300 HOURS WHEN NATURAL FLOWS AT FRIENDSVILLE ARE BETWEEN 1300 AND 2500 CFS, AS ESTIMATED USING USGS GAGE 03075500 NEAR OAKLAND (OAKLAND GAGE), UNLESS AN UNUSUAL OR EMERGENCY CONDITION EXISTS, OR LAKE ELEVATION EXCEEDS THE UPPER RULE BAND.

WHEN NATURAL FLOWS AT FRIENDSVILLE, AS ESTIMATED USING THE OAKLAND GAGE, ARE GREATER THAN 600 BUT LESS THAN 1300 CFS, AND LAKE ELEVATION IS WITHIN THE RULE BANDS SPECIFIED IN CONDITION 14, GENERATION SHALL BE RESTRICTED TO SINGLE-TURBINE OPERATION FOR THE FIRST THREE HOURS OF SCHEDULED GENERATION.

19. (cont)

THE PERMITTEE SHALL MAKE RELEASES THREE HOURS IN DURATION BETWEEN 1000 HOURS AND 1300 HOURS ON FRIDAYS WHEN THE LAKE LEVEL IS HIGHER THAN AN ELEVATION THAT IS ONE FOOT BELOW THE LOWER RULE BAND, AND ON MONDAYS AND ON ONE SATURDAY PER MONTH WHEN LAKE LEVEL IS ABOVE THE LOWER RULE BAND. SATURDAY RELEASES WILL BE ON THE LAST SATURDAY IN APRIL OR THE FIRST SATURDAY IN MAY, ON MEMORIAL DAY WEEKEND, ON LABOR DAY WEEKEND, AND THE FIRST SATURDAY IN JUNE, JULY, AUGUST, AND OCTOBER.

ALL RELEASES FOR WHITEWATER RECREATION SHALL BE AT FULL GATE (640 CFS) WHEN NATURAL FLOW IN THE YOUGHIOGHENY RIVER AT THE OAKLAND GAGE IS LESS THAN 80 CFS.

THE PERMITTEE SHALL PROVIDE SPECIAL WHITEWATER RELEASES FOR THE AUGUST WEEKDAY RACES AND ON WEEKDAYS DURING THE GAULEY RIVER FESTIVAL WHEN THE LAKE LEVEL IS ABOVE THE LOWER RULE BAND, AND WHEN A REQUEST FOR SUCH RELEASES HAS BEEN MADE THROUGH THE ADMINISTRATION ONE MONTH IN ADVANCE OF THE REQUESTED RELEASE DATE.

WHEN LAKE LEVELS ARE BETWEEN THE UPPER AND LOWER RULE BANDS, AND NATURAL RIVER FLOW IS LESS THAN 1300 CFS, NO RELEASES SHALL BE MADE BETWEEN 1600 HOURS AND 0800 HOURS OF THE FOLLOWING MORNING, UNLESS THE RELEASE ALSO PROVIDES THREE CONSECUTIVE HOURS OF FLOWS SUITABLE FOR WHITEWATER BOATING DURING THE HOURS BETWEEN 0800 HOURS AND 1600 HOURS. THE TIMES AND DATES WHEN GENERATION RELEASES NOT SUITABLE FOR WHITEWATER RECREATION HAVE OCCURRED SHALL BE DOCUMENTED IN AN ANNUAL REPORT.

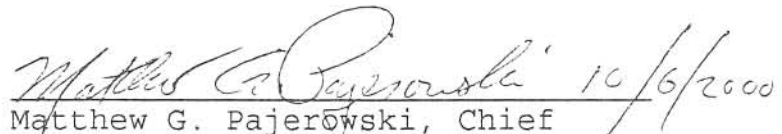
20. ANNOUNCEMENT OF EXPECTED RELEASES - ON EACH THURSDAY, THE PERMITTEE SHALL PLACE ON A RECORDED MESSAGE ACCESSIBLE TO THE PUBLIC BY TELEPHONE, A FORECAST OF EXPECTED RELEASES FOR THE FOLLOWING WEEK. EACH MORNING, BETWEEN 0700 AND 0800 HOURS, THE PERMITTEE SHALL PLACE ON THE RECORDED MESSAGE INFORMATION ON THE SCHEDULED RELEASES FOR THE NEXT 48 HOURS.
21. ZEBRA MUSSEL MONITORING - THE PERMITTEE SHALL IMPLEMENT A ZEBRA MUSSEL (*DREISSENA POLYMORPHA*) MONITORING PROGRAM APPROVED BY THE ADMINISTRATION. THE RESULTS OF SUCH MONITORING SHALL BE SUBMITTED IN AN ANNUAL REPORT.

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22. NOTICE OF GENERATION RELEASES - AT STRATEGIC LOCATIONS, SELECTED IN CONSULTATION WITH THE ADMINISTRATION AND INCLUDING THE SANG RUN AND HOYES RUN ACCESS AREAS, THE PERMITTEE SHALL PROMINENTLY DISPLAY WARNING NOTICES REGARDING THE HAZARD OF RAPID WATER LEVEL FLUCTUATIONS ASSOCIATED WITH WATER RELEASES FROM DEEP CREEK LAKE.
23. ANNUAL REPORT - THE PERMITTEE SHALL SUBMIT AN ANNUAL REPORT TO THE ADMINISTRATION NO LATER THAN JANUARY 31 OF EACH YEAR. THE REPORT SHALL INCLUDE THE FOLLOWING DATA FOR THE PREVIOUS CALENDAR YEAR:
- A) LAKE LEVEL MONITORING (CONDITION 15);
 - B) TEMPERATURE MONITORING (CONDITION 16);
 - C) MINIMUM FLOW RELEASE MONITORING (CONDITION 17);
 - D) DISSOLVED OXYGEN MONITORING (CONDITION 18);
 - E) RELEASES UNSUITABLE FOR WHITEWATER RECREATION (CONDITION 19);
 - F) ZEBRA MUSSEL MONITORING (CONDITION 21).
24. PERMIT SUPERSESSION - THIS PERMIT HAS BEEN REVIEWED AND REVISED AND SUPERSEDES THE APPROPRIATION AND USE GRANTED BY THE FOLLOWING PRIOR PERMIT ISSUED TO:

SITHE MARYLAND HOLDINGS, LLC ON OCTOBER 1, 1999
(GA92S009(02))

BY AUTHORITY OF THE DIRECTOR
, WATER MANAGEMENT ADMINISTRATION


Matthew G. Pajeroski, Chief
WATER RIGHTS DIVISION