



## Division of Surface Water

### Response to Comments

**Project: Dayton Power and Light – J.M. Stuart Station, National Pollutant Discharge Elimination System (NPDES) Permit  
Ohio EPA ID #: 0IB00049**

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Ohio EPA held a public hearing on February 2, 2012, regarding Dayton Power and Light's National Pollutant Discharge Elimination System permit for the J.M. Stuart Station coal fired power plant. This document summarizes the comments and questions received at the public hearing and/or during the associated comment period, which ended on February 6, 2012.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

#### **General Comments on Issuance of Permit**

**Comment: 1: The J.M. Stuart Station is a 2400 MW coal fired electric generating plant located on the Ohio River in Adams County, Ohio. The plant has been in operation since the early 1970s. The plant utilizes a once-through cooling system that withdraws cooling water from the Ohio River and returns it to the river via a discharge canal that was constructed with the approval of the Ohio Department of Health while the plant was being built. The plant applied for a 316(a) variance in 1974 and was granted the variance in 1989. The plant has operated in the same fashion for nearly 40 years. In 2010**

and 2011, US EPA objected to draft permits issued by Ohio EPA that proposed to renew the plant's 316(a) variance. US EPA grounded its objections in an allegation that the existing variance was not supported and/or did not adequately protect Little Three Mile Creek. DP&L reiterates that the 316(a) variances should have been renewed for the reasons outlined in the comments that DP&L submitted to US EPA on April 29, 2011.

DP&L strongly disagrees with the positions that US EPA has taken in its objections to the draft permits issued by Ohio EPA as explained in its April 29, 2011 comments. DP&L incorporates those comments herein and has attached a copy of those comments to this letter as Exhibit A. Further, DP&L previously provided Ohio EPA with a copy of those comments.

Therefore, those comments should already be part of the administrative record. In summary, DP&L disagrees with those portions of the permit which characterize the plant's thermal discharge as a discharge to Little Three Mile Creek because: (1) The site specific regulatory history demonstrates that the discharge should be treated as a discharge to the Ohio River, not Little Three Mile Creek; (2) Ohio EPA has consistently and historically treated discharges to the discharge canal from other outfalls as discharges to the Ohio River; (3) The discharge canal at issue was constructed in the late 1960s and early 1970s pursuant to the approval of the Ohio Department of Health as a treatment system that would enable cooling water to dissipate heat before discharging to and mixing with the Ohio River; (4) The lower portion of Little Three Mile Creek was destroyed and filled-in with the approval of the Ohio Department of Health when the plant was constructed; it no longer exists; (5) Prior to the construction of the plant, the lower portion of Little Three Mile Creek was inundated by the Ohio River as a result of the Army Corps of Engineer's installation of the Meldahl Dam; and (6) The portion of the discharge canal at issue contains backwaters of the Ohio River, and very little, if any, water from the upper portion of Little Three Mile Creek. If this water body is not treated as a private cooling water discharge canal it should be treated as if it is part of the Ohio River, not Little Three Mile Creek.

**Response 1:** On the first point, decisions made prior to the Clean Water Act's passage are not grandfathered by the Act. Many facilities built before the passage of the CWA have had to upgrade to meet state water quality standards. Ohio's approval of the once-through cooling water systems and the relocation of lower Little Threemile Creek does not relieve DP&L of meeting water quality standards for the discharges.

The lower portion of Little Threemile Creek still exists and must be protected by Ohio WQS because it remains a surface water of the state, as defined in ORC 6111.01(H). It is a "watercourse" that "effect(s) a junction with natural surface waters." As such it is subject to applicable Ohio WQS.

The relocation and alteration of the stream channel makes no difference. Many waters of the State of Ohio have had their channels modified during their history;

this does not affect their status as waters of the state, nor does it cause the name of the waterway to change. The lower portion of Little Threemile Creek continues to convey water from the upper, unmodified portion of the stream to the Ohio River. Most of the water in the channelized section of the stream is flow from DP&L outfalls 001 and 002, causing the flow to move through the channelized section of Little Threemile Creek to the Ohio River. While this lower portion of the stream may be at river pool level, the large flows from DP&L outfalls 001 and 002 mean that water in the relocated portion of the stream is not backflow from the Ohio River, but mostly cooling water discharge.

**Comment 2: Lacking any evidence of dead fish or humans injured or harmed by the warm waters currently discharged into Little Three Mile Creek and the Ohio River, I would not alter the status quo whatsoever at DP&L and would urge issuance of the permit as a continuation of past approvals. As a business owner currently trying to renovate the former Ace Hardware building in Maysville, I am in complete solidarity with businesses whose work and operation are subject to regulations that don't actually prevent any proven harm, but create hurdles based on theory and virtually arbitrary, and sometimes agenda-driven, standards. Who has gotten sick from the fish caught in the Ohio River? Have there been repeated fish kills in the area, and what percentage of fish in, say, a 3-mile stretch of the River were killed, how many times per year? What economic or biologic value was involved (\$100?). Where is the proportion here? What is the evidence justifying any denial of a permit?**

**Denial of permits do, however, harm people. They destroy jobs. They lead to despair among the local population, and increase drug and alcohol addiction and "giving up". More people go on welfare (record numbers in the U.S. today). More stop looking for work. These regulations raise electric rates (people are complaining of higher rates in our local paper!). Are higher rates good for the elderly, people on fixed income, and does the pain and suffering justify saving 100 fish, if that! These regulations rifle a message to business—don't even try, don't even try to create jobs and improve the community—we'll stop you! We have a housekeeper who helps us twice per month. She told me even her family is totally dependent on the coal industry—her husband pilots coal barges and her father builds and manages power plant construction. Whereas her father had contracts lined up to build, now his main job is to tear down power plants.**

**Regulations seem to never subside—they just ratchet up, driven by the environmental lobby, which is unconcerned with any real, local, valid evidence of damage. Mathematically speaking, statistically speaking, if fish aren't dying in the Ohio from the warm discharge waters in thousands, then the ONLY damage that will occur is the destruction of jobs if DP&L can't meet the requirements OR higher electric bills imposed by the arbitrary and unfounded tightening of regulations. I've never heard fisherman complain about the warm waters around DP&L—the fish seem to prefer it!**

**Response 2:** The temperature/thermal limits in this permit are not due to any new regulations. The current water quality standards for temperature have been in Ohio regulations for approximately 20 years. The current permit limits are a result of disputes that have been on-going since the 1980s. The permit contains options so that DP&L can find the least costly way of meeting permit requirements.

While Ohio EPA has observed a few dead fish along lower Little Threemile Creek during the summer, most fish avoid the discharge plume during this time. Avoidance causes local biological communities to be essentially absent during the summer, and this represents an impact, as areas of Little Threemile Creek and the Ohio River are not fishable at these times.

The Clean Water Act has two primary ways of dealing with the economic issues of controlling the temperature: (1) a Section 316(a) demonstration to show that impacts are temporary and do not harm the receiving waters; and (2) economic variances that allow exceedances of water quality standards for a fixed period of time. The permit contains specific conditions related to Section 316(a); any discharger can apply for an economic variance.

**Comment 3:** **I would like to thank OEPA for holding this Public Hearing to discuss the NPDES permit for the thermal discharge. I would like to start by saying I am a lifelong resident of the area and avid boater. I am also a water quality biologist and interested in the best decisions being made for the betterment of the area, communities and environment. I am not here to speak out against DP&L, they provide many economic benefits to our area and employ many local residents. I would however, like to see DP&L lower the excessive temperatures of their discharge waters to Little Three Mile Creek and the Ohio River. The 316(a) variances that have been issued in the past have been a disservice to our local water resources. I would ask that OEPA enforce the state water quality standards and Clean Water Act and lower the water discharge temperatures to meet Warm Water Quality Standards. The average temperature range set forth by Ohio EPA for the Ohio River is 45 F in January to 84 F in July. These Ohio River criteria temperatures were set forth to assure the protection of the balanced and indigenous population of shellfish, fish and wildlife in and on Little Three Mile Creek (LTMC) and Ohio River.**

**According to the Factsheet for DP&L Stuart Station NPDES Permit Renewal, the primary and continuing concern regarding the discharges from the DP&L plant is the impact of the effluent temperature and the quantity of heat discharged at outfalls 001 and 002. Effluent temperatures, temperatures in LTMC and temperature in the Ohio River at the confluence of LTMC routinely exceed 104 F during the summer. (98 F is the maximum limit for limited resource waters and considered toxic to aquatic life). And temperatures are occasionally great than 122 F. The maximum effluent temperature reported at the Stuart Station on Jan.1 2002 thru Dec 2006 was 135 F. Temperatures at the outfall exceeded the 104 F on 611 days and exceeded 122 F on 41 days during the same time period. To put that in perspective adults will suffer 3 degree burns (the most serious type) if**

exposed to temps above 120 degrees within 5 minutes or within 30 sec if temp are 130 degrees. Temperatures over 106 degrees are considered painful.

I hope that DP&L and Ohio EPA follow the thermal standards set forth by the State of Ohio to protect the aquatic life in LTMC and the Ohio River. According to the ORSANCO (Ohio River Valley Sanitation Commission) in the immediate vicinity of the LTMC confluence in the summers of 1999 and 2000 sampling showed much lower numbers of fish and fish species compared to upstream sites. It is also stated that it is unlikely that fish or other indigenous aquatic life can survive in this stream during summer months when the in stream temperature are often about 98 F.

I understand that the fishing is great at this location in the winter however with the excessive heat and temperatures during the summer month's fish and macro invertebrates are not able to survive in the area. I believe with lowering the temperature release the diversity of fish and population is improve and become an even better habitat for fishing. The lower temperatures will also allow for safer conditions for boaters. The Ohio River and its streams are considered primary contact waters (meaning swimmable). There are hundreds of boaters that utilize and enjoy this stretch of river during the summer. The high temps are a potential health hazard. According to the published Factsheet provided by EPA it states "boating in a river having a plume of water which is frequently greater than 104 F and possibly as high as 130 F is not desirable and is possibly unsafe to anyone who comes in contact with that water.

I hope that DP&L considers alternative ways to cool the waters from boilers 1, 2 & 3. I hope this will be an opportunity for additional jobs in our area by the construction of additional cooling towers or other alternative technologies. I believe the limits are set forth to be followed by all utilities and hope that DP&L Stuart Station is able to reduce the water to an acceptable level for aquatic life and human health.

**Response 3:** Ohio EPA acknowledges these comments.

**Comment 4:** My husband and I enjoy the property we own on Lick Skillet Road that contains multiple streams including 600+ feet of Little Threemile Creek, not a mile from the DPL plant where the hot water from the plant is being discharged. I do not agree that DPL should be granted continued permission to dump water that violates state water quality standards into my creek.

DPL has gotten away with dumping this hot water for too long through the variance OEPA has granted it. ORSANCO has documented the heat of the water. DPL has NOT proved that the excessively hot water has not harmed the aquatic life of Little Threemile creek and the Ohio River. The burden of proof of safety of its action is on DPL, period. DPL has had twenty years since the variance was granted to make a case of no harm

**and it clearly has not. This issue does not even address DPL's elevated mercury levels in its waste water.**

**Do not permit DP&L to continue to get away with dumping harmful and toxic hot discharge water into the Ohio River or Little Threemile Creek. Do not grant DPL either option giving them another 54 MONTHS to dither with their water. Dumping the hot water must stop now.**

**Response 4:** Ohio EPA recognizes the need to limit the thermal discharges from the DP&L Stuart Station. However, to prohibit the discharge of the hot water immediately would require shutting down boiler units 1, 2 and 3. This would create undue stress for those employed by DP&L and for those who are serviced by DP&L.

The compliance schedule requires the facility to complete the construction necessary to meet Ohio Water Quality Standards in either the Ohio River or the Little Threemile Creek. Compliance schedules to meet new or more restrictive water quality based effluent limits are permissible under Ohio Administrative Code 3745-33-05 (G)(2). The construction necessary to obtain the Water Quality Standards will be a major undertaking for the facility and will require time evaluate, design and build. The schedule lays out final and interim deadlines for the construction process and provides an enforceable means for Ohio EPA to track DP&L's progress.

#### Comments on Part I.A and 1.B of the NPDES permit – Effluent Limitations

**Comment 5:** The draft permit includes both interim and final effluent limitations and monitoring requirements for Outfalls 001 and 002. These requirements should be eliminated from the permit because the temperature limits at issue do not apply to DP&L's discharge canal for a variety of reasons that DP&L has explained, in detail, in its comments. To the extent that Ohio EPA is unwilling to remove these limits from the permit it should revise the start of the final limits from 55 to 79 months to allow for 316(a) studies to be completed and a full review of alternatives.

The permit language that addresses the effective dates for these provisions is also not clear. Accordingly, DP&L requests that Ohio EPA revise the permit to make it clear that the interim limits and monitoring requirements for both outfalls go into effect on the effective date of the permit and remain in effect through the end of the 78<sup>th</sup> month after the permit is issued, and correspondingly, that the final limits and monitoring requirements go into effect at the beginning of the 79th month following the effective date of the final permit.

**Response 5:** We believe that lower Little Threemile Creek is a water of the state; WQS apply to this stream.- See Response #1. We agree to extend the compliance schedule to 79 months. The interim and final table dates have been clarified in the final permit.

**Comment 6:** There appear to be typographical errors on Page 2 and Page 6 of the draft permit associated with the title for the table of interim effluent limitations and monitoring requirements for Outfalls 001 and 002. On Page 2 of the draft permit the table is titled "Table — Final Outfall 001 — Interim — 001 — Final." Similar text appears on Page 6 associated with Outfall 002. Since these tables are for the interim effluent limitations and monitoring requirements, the verbiage "001 — Final" and "002 — Final" should be removed from Pages 2 and 6 respectively.

**Response 6:** These titles are generated by the SWIMS permitting system and cannot be changed.

**Comment 7:** The draft permit includes interim and final effluent limitations and monitoring requirements for Outfall 012. DP&L does not understand why the permit utilizes several different flow rates for discharges from the same outfall in deriving the effluent loading limits. For example, page 13 of the draft permit indicates that effluent loadings for total suspended solids (TSS) and oil & grease (O&G) are based upon a design flow of 23.0 MGD. However, effluent loadings for mercury are based upon a design flow of 15.9 MGD. Ohio EPA failed to provide any justification for this discrepancy in the draft permit or Fact Sheet. As a result, DP&L requests that the flow rate upon which the loading limits for mercury from this outfall are based be increased from 15.9 to 23.0 MGD unless there is a sound factual basis for utilizing two different flow rates. DP&L may be able to provide further comments addressing this issue after Ohio EPA provides an explanation.

**Response 7:** Our rule language prevents us from accepting this change. In setting loading limits for WQ-based limits, Ohio EPA must use "a reasonable measure of average" flow in setting WLAs [OAC 3745-2-05(A)(4)(b)]. Usually the Agency uses an upper bound of monthly averages in these calculations. The value of 15.9 MGD represents this upper bound of monthly averages. Therefore this value is used to set loading limits for WQBELs.

This rule language does not address treatment technology-based limits such as TSS and oil & grease. Those limits may be based on the design flow of the treatment system. Having loading limits based on two different flows, one for technology-based limits and one for water quality-based limits, is not unusual in Ohio NPDES permits.

**Comment 8:** There appears to be a typographical error on Page 13 of the draft permit, in the notes for Outfall 012. The third note on Page 13 of the draft permit should be changed from and Part II, Item 0>" to "... and Part II, Item 0."

The fourth note relative to Outfall 012 on Pages 11 and 13 of the draft permit states "For Copper, see Part II, Item U." However, Part II, Item U does not discuss copper at Outfall 012. As such, this note on Pages 11 and 13 of the draft permit should be eliminated.

**Response 8:** These changes have been made in the revised permit.

**Comment 9:** The draft permit includes interim and final effluent limitations and monitoring requirements for Outfall 013. Effluent loading limits in the draft permit for total suspended solids (TSS) and oil and grease (O&G) for this outfall are calculated using a flow of 20.8 MGD per the first note on both Pages 15 and 17 of the draft permit. However, these same notes also indicate that the effluent loading limits for total recoverable copper and dissolved hexavalent chromium are based on a completely different flow from the same outfall - 19.1 MGD. The Fact Sheet that accompanies the permit indicates that the flow of 19.1 MGD represents the 95th percentile of the 30-day average flows at this outfall. However neither the Fact Sheet nor the draft permit explain the basis upon which two different flow rates are used to calculate loads for the same outfall. The reduction of flow-rate upon which the loading limits for total recoverable copper and dissolved hexavalent chromium are based effectively penalizes DP&L for a slight reduction in flow that occurred during the previous permit term because it results in a more stringent discharge limitation. Once a more stringent limit is imposed, the antidegradation and antibacksliding rules could make it very difficult, if not impossible, to increase the limit in the future should the flow rates return to their prior levels. Flow from this outfall is at least partially influenced by precipitation which, due to its randomness, may just as easily result in an increase in the 95th percentile of the 30-day average flows for this outfall.

DP&L is not requesting any increase in loading limits for this outfall. Rather, DP&L believes that the flow rates and corresponding limits outlined in its existing permit should be retained since they are environmentally protective, having been previously derived by Ohio EPA through its waste load allocation procedure. As a result, DP&L disagrees with the need for any reduction in the proposed flow-rate for effluent loading for copper and hexavalent chromium from this outfall and requests that the loading limits for these two parameters be maintained at 4.17 kg/day and 2.44 kg/day respectively, based upon a flow rate of 20.8 MGD.

**Response 9:** Ohio EPA cannot make this change for the reasons specified in Response 7.

**Comment 10:** The draft permit includes a final effluent limitation of 1.0 TUa for *Ceriodaphnia dubia* at Outfall 013 effective 37 months after the effective date of the permit. In addition, Part I.C.B of the draft permit includes a schedule of compliance setting out a series of interim milestones that must be met in the performance of a Toxicity Reduction Evaluation (TRE). DP&L believes the *Ceriodaphnia* toxicity results that previously may have justified the requirement for a TRE and the need for a final effluent limitation of 1.0 TUa for *Ceriodaphnia dubia* were likely due to metal concentrations in the discharge that DP&L previously addressed. These matters are discussed in greater detail in a letter dated July 12, 2007 to Mr. Patrick Hudnall, which is incorporated herein and is attached hereto as Exhibit B. Additional measures were approved by Ohio EPA as part of a Permit to Install dated August 8, 2008 (Application No.

**660049), which is attached as Exhibit C.**

**As a result of the steps outlined in the July 12, 2007 letter and August 8, 2008 PTI, toxicity at this outfall has virtually been eliminated. This fact is supported by the data included in Table 4 of the Fact Sheet. This table verifies that all toxicity tests performed on the discharge from Outfall 013 over the last four years (since March of 2008) have demonstrated that toxicity is routinely and consistently less than 1.0 TUa. This conclusion is also supported by DP&L's most recent data from December, 2011. Consequently there is no factual basis for requiring DP&L to implement a TRE, imposing a whole effluent toxicity limit, or continuing toxicity monitoring at Outfall 013. Accordingly, DP&L requests that these requirements be removed from the permit because they are not justified by current data. The historical data upon which Ohio EPA relied are no longer representative of current (and more recent) conditions as a result of the measures that DP&L has taken to address the issue and there is no longer a reasonable factual basis for imposing these requirements. Thus, including them in the permit would be both unreasonable and unlawful.**

**Response 10:** Ohio EPA has re-evaluated the whole effluent toxicity data from June 2008 through December 2011 for both Ceriodaphnia dubia and Fathead minnows. Based on the results and in accordance with rule 3745-33-07 the discharge from outfall 013 has been placed into biomonitoring category 3 for Ceriodaphnia dubia and Fathead minnows. This indicates there is no reasonable potential to exceed the toxicity WLA, but some toxicity could still exist. Ohio EPA has revised the permit to include only monitoring for both species to continue to document whether or not a toxicity problem exists. The compliance schedule to complete a toxicity reduction evaluation has also been removed.

**Comment 11:** The draft permit contains monitoring requirements for mercury as part of both the interim and final effluent requirements for Outfall 013. The draft permit imposes an increase in frequency of mercury monitoring to once per month versus the quarterly monitoring frequency required by the existing permit. Neither the draft permit nor the Fact Sheet provides any justification for this increase in monitoring frequency. Accordingly, DP&L requests that the monitoring frequency for mercury at Outfall 013 be retained at once per quarter.

**Response 11:** We have retained quarterly monitoring requirement for mercury at this outfall.

**Comment 12:** The draft permit includes interim and final effluent limitations and monitoring requirements for Outfall 021. The interim effluent limitations and monitoring requirements are proposed to be in effect "during the period beginning on the effective date of this permit and lasting 54 months after the effective date..." The final effluent limitations and monitoring requirements are proposed to be effective "during the period beginning 54 months from the effective date and lasting until expiration date..." The permit should provide that the interim limitations and monitoring requirements are effective through the end of the 54th month after the

**effective date of the permit and the final effluent limitations and monitoring requirements commence at the beginning of the 55th month.**

**Response 12:** This has been clarified in the revised permit.

**Comment 13:** There appears to be a typographical error on Page 21 of the draft permit associated with the title for the table of interim effluent limitations and monitoring requirements for Outfall 021. The table is titled "Table — Calculated Outfall/Station 021 — Interim — 021 — Final." Since this table is for the interim effluent limitations and monitoring requirements, the verbiage "021 - Final" should be removed.

**Response 13:** These titles are generated by the SWIMS permitting system and cannot be changed.

**Comment 14:** The draft permit's final effluent limitation for Outfall 021 includes a maximum thermal discharge limitation of 3570 million BTU/hour that becomes effective 55 months into the permit term unless DP&L obtains a CWA 316(a) variance justifying an alternative thermal limit. The Fact Sheet includes a description of how this effluent limitation was derived. Ohio EPA's waste load allocation (WLA) procedure for the thermal discharge utilizes 25% of the 7Q10 Ohio River flow presumably since the plume from Stuart Station is buoyant and "...only affects the upper one-fourth of the water column (approximately a 10-foot plume in the 40-foot river depth). This indicates that 25% of the critical flow should be used as a mixing zone." However the calculation which is used to derive the thermal discharge effluent limitation does not take a mixing zone into account. It simply uses a percentage of the receiving stream's flow to determine the allowable thermal load which could be discharged to the Ohio River, absent a mixing zone (i.e. at the point of confluence of the discharge and the Ohio River) in order to maintain a Ohio River surface temperature at or below 89°F. Ohio EPA's waste load allocation procedures are designed to assure that the water quality standards are met at the edge of the mixing zone pursuant to Ohio Administrative Code 3745-2.

Therefore, consistent with proper WLA processes, a mixing zone should be included in the determination of the allowable thermal loading calculation and the allowable thermal effluent limitation adjusted accordingly. Further, while Ohio EPA refers to a "mixing zone" in the Fact Sheet, Ohio EPA's regulatory definition of mixing zone refers to an area of the water body contiguous to a discharge, i.e. a geographical region, not a percentage of flow.

In addition, DP&L questions the validity of Ohio EPA's methodology in calculating the allowable thermal limitation, specifically the use of only 25% of the Ohio River 7Q10 flow. The fact that the thermal plume is buoyant and, conceivably only affects the upper 25% of the water column means that a full 75% of the water column is not affected by the thermal discharge and therefore accessible to fish and aquatic life. DP&L should be afforded the full assimilative capacity of the receiving stream in any

**determination of effluent limits. Such is the case for other discharge parameters and such should be the case for the thermal effluent. The manner in which Ohio EPA has addressed this issue in this permit appears to be highly unusual. DP&L would like to know whether Ohio EPA has addressed other thermal discharges in this manner. Further, DP&L would like to discuss this issue with Ohio EPA before the permit is finalized.**

**Response 14:** We believe that the 25% of critical flow assumption is, in effect, a mixing zone. We disagree that that Ohio EPA must designate a physical area as a mixing zone. First, the 25% assumption acknowledges that ambient criteria will be exceeded at points near the discharge. This is the purpose of a mixing zone. Given this, and the data that shows the discharge takes several miles to fully mix with the Ohio River, it would be inappropriate to establish an area of WQS exceedance that would cover the entire volume of the river over a length of miles.

Ohio's rules contain various references to stream flow percentages that function as mixing zones. OAC 3745-2-05(A)(2)(f) sets up default mixing percentages to be used in wasteload allocations. Also, the mixing zone rule in this chapter specifically mentions mixing zone demonstrations that are expressed in terms of a percentage of critical flows [OAC 3745-2-08(B)(2)].

We do not fully understand the comment about using the full assimilative capacity, similar to other discharges. Standard wasteload allocation procedures for Ohio River discharges do not allocate 100% of the river capacity for aquatic life standards. The standard assumptions are to allocate 10% of the Ohio River critical flow for average aquatic life standards, and 1% of the Ohio River critical flow for maximum aquatic life standards.

Thermal allocations for very large volume discharges to the Ohio River are done on a case-by-case basis. For allocations to inland rivers, we use the stream/design ratio in OAC 3745-2-05 to set thermal allocations.

We understand that our mixing assumptions are based on the mixing characteristics of the current discharge, and that these may change. If DP&L re-routes the discharge to the Ohio River, and believes that a higher percentage of critical flow is protective under the new discharge configuration, Ohio EPA would consider any mixing zone modeling submitted by the company.

Because the Ohio River temperature standards contain both monthly average and daily maximum standards, we have calculated average thermal load limits, and included those values in the permit. Also, we have included winter season limits to reflect ORSANCO's seasonal standards.

**Comment 15:** **Outfall 603 is a proposed new outfall that discharges blowdown from the plant's FGD air pollution control systems (scrubbers) to the plant's bottom ash treatment system, which eventually discharges to Outfall 012. Accordingly, Outfall 603 is an internal outfall that does not discharge directly to waters of the state or waters of the United States. The draft**

permit includes a new proposed monitoring location, a suite of burdensome monitoring requirements, and final effluent limitations for pH and total suspended solids at the internal outfall (Outfall 603). These requirements are unlawful and unreasonable. They are unreasonable because there are no compliance issues with pH or TSS at Outfall 012. Thus, there is no factual basis for imposing these new monitoring requirements and effluent limitations at Outfall 603.

DP&L questions Ohio EPA's regulatory authority to impose these effluent limitations upon DP&L as part of the permitting process because the outfall at issue is an internal outfall that does not directly discharge to waters of the state. In *American Iron & Steel v. EPA*, 115 F.3d 979 (D.C. Cir. 1997), a court reviewed the Clean Water Act and concluded that EPA did not have the authority to impose limits on internal waste streams prior to their discharge to regulated waters. A few years later, EPA revised its regulations by adding the internal waste stream provisions to 40 CFR 122.45.4 EPA's internal waste stream rule only authorizes the regulation of discharges from internal outfalls when "exceptional circumstances" make it "impractical or infeasible" to impose effluent limitations and monitoring requirements at the point at which a discharge is made to regulated waters. Further, when EPA imposes such requirements on an internal waste stream the rule requires it to identify the "exceptional circumstances" at issue and explain the factual basis upon which it is justifying the requirements in the permit's fact sheet.

Here, Ohio EPA's sole justification for including monitoring of this proposed new outfall appears to be that:

All of the monitoring requirements at this outfall are based upon requirements at other power plants located in Ohio which have (or are installing) very similar FGD treatment systems.

This justification is not sufficient. The fact that Ohio EPA has imposed similar requirements on other facilities does not mean that it is reasonable or appropriate to require them at this facility. Further, Ohio EPA has not explained the "exceptional circumstances" which justify these requirements. Nor has it explained how or why it would be impractical or infeasible to address these issues at Outfall 012. Ohio EPA's failure to adequately explain and justify the imposition of these requirements is particularly problematic given the fact that effluent monitoring data from Outfall 012 verify that there are no compliance issues with meeting the pH and TSS effluent limitations for Outfall 012 that are in the existing permit. Thus, there is not a reasonable factual basis for imposing these requirements — they are unlawful and unreasonable and should be removed from the permit before it is finalized. Finally, effluent loadings appear to be based upon a flow rate (.43 MGD) which is not representative of the actual flow at this location.

In addition, the once-per-two-weeks mercury monitoring frequency at this outfall is excessive. While DP&L understands Ohio EPA's desire to

**require monitoring for mercury, the frequency should balance the administrative burden and expense imposed upon the plant with the need to collect data. For example, the monitoring for mercury is required only on a quarterly basis from Outfall 013. Consequently, the monitoring frequency for mercury at this outfall should be no more than monthly.**

**Response 15:** First, the American Iron and Steel Institute (AISI) decision does not prohibit an NPDES authority from establishing effluent limits at internal outfalls. The AISI decision only prohibits setting water quality-based limits at internal outfalls; NPDES authorities may set treatment technology limits at internal outfalls. Setting treatment technology limits at internal stations is commonly done to prevent permittees from substituting dilution for treatment [implementing 40 CFR 125.3(f)].

Because there is further treatment of TSS, and limits for TSS and oil&grease at final outfall 012, we have removed the treatment technology limits for outfall 603. The station and the monitoring requirements remain in the permit for two reasons: (1) U.S. EPA is working on revised effluent guidelines that will likely include limits for metal parameters applicable at this point. It will be important to have data on these pollutants available to compare with those treatment technology standards when they come out (due this fall); and (2) knowing that scrubber wastewater has higher concentrations of mercury than ash wastewater (from data at other power plants), it is likely that treatment will be required at this point to meet the WQBEL for mercury at outfall 012.

We agree to reduce the mercury monitoring frequency at this outfall to once per month.

**Comment 16:** The draft permit includes a new proposed monitoring location with a suite of monitoring requirements and effluent limitations for total suspended solids beginning with the effective date of the permit at Outfall 604, an internal outfall. As described in Part 11.A of the draft permit and on page 21 of the Fact Sheet, this outfall consists of the discharge of leachate and contact water from the Carter Hollow Landfill to the fly ash landfill waste water treatment system. Thus, Outfall 604 is an internal outfall to which water quality standards and water quality based effluent limitations do not apply. DP&L questions Ohio EPA's regulatory authority to impose these effluent limitations upon DP&L as part of the permitting process because the outfall at issue is an internal outfall that does not directly discharge to waters of the state (see discussion above relative to Outfall 603). Moreover, there are no federal effluent guidelines applicable to this outfall. Ohio EPA's sole justification for including monitoring of this proposed new outfall is that:

**Monitoring requirements for this outfall are based upon best professional judgment.**

There is no discussion as to the derivation of the proposed limitations for TSS at Outfall 604. Since this is a proposed internal outfall to which no effluent guidelines apply and there is a downstream wastewater treatment

**system to control TSS prior to the final discharge, there is no basis for a requirement to implement effluent limitations and DP&L requests that they be removed from the permit.**

**In addition, the once-per-two-weeks mercury monitoring frequency at this outfall is excessive. While DP&L understands Ohio EPA's desire to require monitoring for mercury, the frequency should balance the administrative burden and expense imposed upon the plant with the need to collect data. For example, the monitoring for mercury is required only on a quarterly basis from Outfall 013. Consequently, the monitoring frequency for mercury at this outfall should be no more than monthly.**

**Response 16:** We have removed the TSS limits because there is additional removal of suspended solids in the landfill pond (outfall 019). Outfall 019 contains a limit for TSS.

The station and the monitoring requirements remain in the permit for three reasons: (1) As this is a new discharge of pollutants under the Antidegradation Rule, the treatment systems must meet Best Available Demonstrated Control Technology. The evaluations in the compliance schedule are meant to identify what BADCT is for this type of discharge; (2) U.S. EPA is working on revised effluent guidelines that will likely include limits for metal parameters applicable at this point. It will be important to have data on these pollutants available to compare with those treatment technology standards when they come out (due this fall); and (3) data from similar landfills at other power plants suggest that there is likely to be treatable concentrations of metal parameters in the landfill leachate/runoff. The schedule provides a clear path and timelines in this likely case. If metal parameters are not detected at treatable concentrations, the schedule could be removed from the permit by modification.

We agree to reduce the mercury monitoring frequency at this outfall to once per month.

**Comment 17:** The draft permit includes proposed final effluent concentration and loading limitations at Outfall 609 for total suspended solids, winter and summer ammonia, and CBOD5 beginning with the effective date of the permit. These limits are either new or impose significant reductions from existing limitations. Neither the draft permit nor the Fact Sheet contains the basis for these proposed final effluent limitations at Outfall 609. In fact, the Fact Sheet states:

**Limits for total suspended solids and CBOD5 are proposed to continue in the draft permit, and are based upon secondary treatment standards.... Monitoring requirements for ...ammonia... are all proposed to continue in the draft permit and are based upon Ohio EPA guidance for industrial discharges.**

**Furthermore Table 13-609 of the Fact Sheet places ammonia (winter) in Group 2 (Projected Effluent Quality < 25% of WQS) which specifies that a waste load allocation is not required, no limit is recommended and**

monitoring is optional. No mention is made in Table 13-609 of ammonia (summer), total suspended solids or CBOD5. Table 14-609 of the Fact Sheet contains the final effluent limits and monitoring requirements for Outfall 609 and proposes to maintain limits and monitoring requirements for total suspended solids, ammonia and CBOD5 as they exist in the current permit. Consequently, DP&L submits that there is no basis for the revised final effluent limitations and additional monitoring requirements associated with Outfall 609 and requests that the final effluent limitations and final monitoring requirements associated with Outfall 609 be modified in the permit such that the conditions in the existing permit are maintained.

**Response 17:** These limits are Best Available Demonstrated Control Technology (BADCT) standards from the Permit-to-Install for this treatment works. They are the design standards in the PTI. BADCT standards are typically required as design limits when a sewage treatment plant is largely rebuilt. The lower BADCT limits remain in the permit.

**Comment 18:** In addition I am also concerned about the high concentrations of Mercury at outfall 012. This outfall discharge is exceeding the set limits for the State of Ohio. The levels seem to be extremely high and well over the threshold set by the Ohio EPA. This excessive release of Mercury is affecting our state waters and all biological life in the waters.

**Response 18:** Ohio EPA acknowledges this comment. The draft permit requires the facility to meet effluent limits for mercury at outfall 012 within three years of the effective date of the permit. Ohio EPA must allow a reasonable time for a facility to meet new limits. In this case, DP&L will likely need to install additional treatment of scrubber water to meet the mercury limit.

**Comment 19:** I would like to see the toxicity limits for outfall 013 meet water quality standard limits. The pollution from this discharge is excessive and needs to be reduced or eliminated before entering the Ohio River.

**Response 19:** The discharge currently meets toxicity limits and does not have the potential to exceed them. See response #10.

**Comment 20:** Ohio EPA must establish numeric effluent limits based on Best Available Technology ("BAT") for the Plant's Flue Gas Desulfurization wastewater discharged from Outfalls 012 and 603.

Sections 301 and 402 of the Clean Water Act ("CWA"), 33 U.S.C. §§ 1311 & 1342, require Ohio EPA to establish numeric effluent limitations reflecting application of Best Available Technology ("BAT") to reduce or eliminate the Plant's discharges of wastewater from its Flue Gas Desulfurization ("FGD") air pollutant "scrubber" system before issuing (or renewing) any NPDES permit that authorizes such discharges. See 33 U.S.C. § 1311(b)(2)(A)(i) (point sources "shall" achieve "effluent limitations" that "shall require application of" Best Available Technology ("BAT") to reduce

pollutant discharges to the maximum extent “technologically and economically achievable,” including “elimination of discharges of all pollutants” if it is achievable); *id.* § 1342(a)(1) (requiring that NPDES permits may only be issued “upon condition that” they ensure that, *inter alia*, the requirements in 33 U.S.C. § 1311 are met). Federal regulations promulgated by U.S. EPA also require that “[t]echnology-based treatment requirements under Section 301(b) of the [CWA] represent the minimum level of control that *must be imposed*” in a NPDES permit. 40 C.F.R. § 125.3(a) (emphasis added). BAT is a stringent treatment standard that has been held to represent “a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges.” *EPA v. Nat’l Crushed Stone Ass’n*, 449 U.S. 64, 74 (1980).

Because U.S. EPA’s applicable Effluent Limitation Guidelines (“ELGs”) do not yet include BAT limits for wastewater from FGD systems, U.S. EPA regulations require Ohio EPA to use its Best Professional Judgment (“BPJ”) to set BAT limits for these discharges. 40 C.F.R. § 125.3(c)(2), (d) (“to the extent that EPA-promulgated effluent limitations are inapplicable,” NPDES permit writers “*shall apply* the appropriate factors listed in § 125.3(d)” to set case-by-case technology-based effluent limitations based on BPJ) (emphasis added); see also O.R.C. 6111.042 (authorizing the Director to make BPJ determinations in NPDES permits); O.A.C. 3745-33-05(A)(1)(e) (Director shall set “[a]ny more stringent limitations” in NPDES permits “required to comply with any other state or federal law or regulation”).

According to DP&L’s own measurements, the Plant’s FGD scrubber wastewater contains a number of pollutants, including chlorides, copper, dissolved solids, lead and zinc. See Fact Sheet at 44, 57. Despite acknowledging that these pollutants will be present in FGD wastewater that pass through Outfall 603 and be discharged through Outfall 012, Ohio EPA has not established any TBELs based on BPJ in the Draft Permit for these pollutants. (Draft Permit at 12-13). When not properly limited, these pollutants have been documented to have significant adverse effects on human health and the environment.

Indeed, there is nothing in the record indicating that Ohio EPA ever considered BAT for the Plant’s FGD wastewater. Although Ohio EPA erroneously states that “[i]f regulations have not been established for a category of dischargers, the director *may* establish technology-based limits based on best professional judgment (BPJ)” (Fact Sheet 1-2 (emphasis added)), the CWA makes clear that permit writers *shall* apply technology based limits. 40 C.F.R. § 125.3(c)(2), (d). The use of the word “shall” in both the federal statute and regulations does not leave Ohio EPA with any discretion as to whether technology-based effluent limitations should be established. See *Bennett v. Spear*, 520 U.S. 154, 172 (1997) (the imperative “shall” makes clear that the agency action specified is obligatory, not discretionary); see also *Alabama v. Bozeman*, 533 U.S. 146, 153 (2001) (“The word ‘shall’ is ordinarily the language of command.”) (internal quotations and citations omitted).

Ohio EPA's failure to set TBELs for FGD wastewater discharges in the Draft Permit is especially glaring given that U.S. EPA recently issued guidance regarding how states should permit these discharges. In 2009, U.S. EPA conducted a comprehensive study of wastewater treatment technologies being used by coal-fired power plants with FGD systems. U.S. EPA, Steam Electric Power Generating Point Source Category: Final Detailed Study Report (Oct. 2009) (describing available wastewater treatment technologies for FGD wastewater and the levels of pollutant reduction that those technologies can achieve). Following this study, U.S. EPA issued detailed guidance outlining those technologies to assist state permitting agencies in setting BAT. See *generally* Memorandum from James A. Hanlon of EPA's Office of Water to EPA Water Division Directors, dated June 7, 2010, at Attachment A (hereinafter "EPA Memo"), attached as Ex. A, available at [http://cfpub.epa.gov/npdes/docs.cfm?view=allprog&program\\_id=14&sort=date\\_published](http://cfpub.epa.gov/npdes/docs.cfm?view=allprog&program_id=14&sort=date_published).) (outlining the types of FGD wastewater treatment technologies plants can use to reduce pollutant levels and reinforcing that state permitting agencies "must comply with specific minimum requirements of the NPDES program," including the requirement that "an authorized state must include technology-based effluent limitations in its permits. . .").

Ohio EPA was even provided a detailed example of a similar plant in New Hampshire that had satisfied its statutory duties to evaluate BAT and set TBELs for FGD wastewater. During the permitting process, Region 5 emailed the draft BAT determination for Merrimack Station to a permitting officer at Ohio EPA. Email from Sean Ramach, U.S. EPA Region 5, to Eric Nygaard, Ohio EPA, dated Oct. 18, 2011, attached as Ex. C. This Draft Permit for Merrimack Station, is a model for compliance with the requirements of the CWA in setting limits for FGD wastewater. See *id.* (attaching U.S. EPA Region 1, *Determination of Technology-Based Effluent Limits for the Flue Gas Desulfurization of Wastewater at Merrimack Station in Bow, New Hampshire* (Sept. 2011)). Acknowledging that a permitting authority must develop technology-based limits for Merrimack Station's FGD wastewater on a case-by-case BPJ basis pursuant to CWA § 402(a)(1)(B). . . ." *Id.* at 7. The Merrimack permit author examined eleven different types of FGD wastewater treatment technologies using the BAT factors before settling on the Best Available Technology and establishing corresponding technology-based limits. *Id.* at 14-26.

Ohio EPA may not lawfully renew the Stuart Power NPDES permit until it undertakes a similar process for the Plant's FGD wastewater at Outfalls 012 and 603. Ohio EPA is under a non-discretionary duty to independently evaluate the available pollutant control technologies for FGD wastewater, such as vapor-compressed evaporation, physical/chemical treatment and biological treatment, and to impose permit limits that reflect the stringent nature of BAT. Even assuming *arguendo* that the current level of treatment of FGD wastewater at the Plant is BAT (which we do not concede that it is), at a minimum Ohio EPA must establish numeric effluent limitations based

**on the pollutant reductions that the proposed system can achieve. See 40 C.F.R. § 125.3(c), (d).**

**Response 20:** We disagree that the Clean Water Act requires Ohio EPA to set treatment technology limits in this situation. Section 301(b)(2) of the Act requires that “There shall be achieved....effluent limits which shall require the Best Available Technology Economically Achievable for such category or class of point sources....as determined in accordance with regulations issued pursuant to” Section 304(b)(2) of the Act. Section 304(b)(2) requires that the EPA Administrator “shall publish effluent limit regulations”. These regulations shall “identify amounts of constituents and....characteristics of pollutants, the degree of effluent reduction attainable through application of best control measures and practices....for classes and categories of point sources”. This is a reference to the effluent guideline regulations in 40 CFR Parts 400-499. These regulations specify BAT effluent regulations for a variety of industries, including steam electric power plants (40 CFR 423). The combination of these sections of the Act limits the mandatory application of treatment technology controls to the effluent guidelines issued by U.S. EPA. U.S. EPA did not issue BAT effluent limitations for “low volume wastewater”, of which scrubber wastewater is a part, in its 1982 regulations.

U.S. EPA has issued regulations under Section 304(b)(2) that allow treatment technology limits to be issued at the discretion of the permitting authority. Specifically 40 CFR 125.2 (c) and (d) set out the factors that must be considered when making best professional judgments of BAT limits. The rule language states that treatment technology limits “may be imposed through one of the following three methods”. The three methods include implementation of federal effluent guidelines (implementation of which are mandatory under the Act), case-by-case limits, commonly referred to as Best Professional Judgment (BPJ), and a combination of the first two. However, BPJ limits cannot be looked at as mandatory due to the use of “may” in the rule.

Ohio EPA has the discretionary authority to include BPJ limits in NPDES permits. ORC 6111.042 sets the criteria for BPJ limits, and intentionally tracks the language in 40 CFR 125.3(c)(2). In this case the Agency has chosen not to set specific limits for outfall 603, primarily because federal BAT regulations for this wastestream are due to be proposed in early 2013. Ohio EPA does not want to set specific numeric limits now when U.S. EPA may change them in a year or two.

We anticipate that DP&L will need to install treatment at outfall 603 in order to meet the water quality-based limit for mercury at outfall 012. The untreated scrubber water is likely to be more concentrated in mercury than the untreated ash wastewater. Effluent data reported by DP&L indicates that outfall 012 met the mercury limit prior to scrubber water being added to the discharge. Treating the more concentrated scrubber water discharge is a logical way to meet the final effluent limit for mercury.

**Comment 21: Ohio EPA must set Best Available Technology limits for Heat. We**

appreciate that Ohio EPA has taken some steps to begin to address the Plant's harmful thermal discharges. In response to U.S. EPA Region 5's objection that the thermal limits in the previous permit did not meet the standards of Clean Water Act Section 316(a) to assure the protection of a balanced and indigenous population of aquatic life in Little Threemile Creek,<sup>4</sup> Ohio EPA added a schedule of compliance that requires DP&L either (a) to meet water quality-based effluent limits for thermal discharges into Little Threemile Creek; or (b) to reroute the discharge directly to the Ohio River and meet the thermal limits for the Ohio River.

As we explained in our comments to U.S. EPA Region 5 in support of the proposed objection, it is legally required that Ohio EPA ensure compliance with water quality standards in the absence of a thermal variance that has been properly approved under Clean Water Act Section 316(a). Letter from Thomas Cmar, NRDC, to Sean Ramach, U.S. EPA Region 5, dated Apr. 29, 2011, attached as Addendum. However, the Draft Permit's limits remain inadequate because Ohio EPA still has not conducted an analysis of BAT for thermal discharges at the Plant. Technology-based effluent limitations are a necessary minimum requirement for a permit "regardless of a discharge's effect on water quality." *Am. Petroleum Inst. v. EPA*, 661 F.2d 340, 344 (5th Cir. 1981); see also *PUD No. 1 Jefferson County v. Wash. Dep't of Ecology*, 511 U.S. 700, 704 (1994) (state water quality standards are "supplementary" to required individual technology-based limitations) (citing *EPA v. Calif. ex. rel. Water Res. Control Bd.*, 426 U.S. 200, 205 n.12 (1976)); *Hooker Chems. & Plastics Corp. v. Train*, 537 F.2d 620, 623 (2d Cir. 1976) (CWA "predicate[s] pollution control on the application of control technology on the plants themselves rather than on the measurement of water quality.").

The Draft Permit does not include a thermal variance under Clean Water Act Section 316(a). (See Fact Sheet at 18; 2008 Draft Fact Sheet at 18). In the absence of such a variance, the Clean Water Act requires that heat be treated as any other pollutant and be subject to TBELs that reflect BAT. See 33 U.S.C. § 1311(b)(2)(A)(i) (NPDES permits "shall require application of" BAT to reduce pollutant discharges to the maximum extent "technologically and economically achievable," including "elimination of discharges of all pollutants" if it is achievable); *id.* § 1362(6) (defining "pollutant" to include "heat"); *U.S. Steel Corp. v. Train*, 556 F.2d 822, 840 n.27 (7th Cir. 1977) (noting that Section 301(b) of the Act requires effluent limitations on thermal discharges); see also *In re Dominion Energy Brayton Point, L.L.C.*, NPDES Appeal 03-12, 2006 WL 3361084, slip op. at 85 (E.A.B. Feb. 1, 2006) ("[T]hermal pollutants will be regulated as any other pollutant unless an owner or operator of a point source can prove that a modified thermal limitation can be applied which will assure protection and propagation of a balanced indigenous population.") (citing Clean Water Act legislative history). Because U.S. EPA's applicable technology-based effluent limitation guideline – which has not been updated since 1982 – does not address thermal pollution, Ohio EPA is required to set a TBEL in this permit for thermal discharges based on its determination of BAT using BPJ.

There is nothing within the available record that indicates that an analysis of BAT for thermal discharges has ever been conducted, let alone that any thermal BAT analysis was revised in connection with the current NPDES permit renewal process. The Plant currently uses antiquated once-through cooling techniques that almost certainly do not represent BAT. Conducting the legally required BAT analysis for the plant's thermal discharges would almost certainly require making changes to the plant's cooling system.

A recent technical review of technological options for compliance with Clean Water Act Section 316(a) and 316(b) for FirstEnergy's Bayshore Power Plant in Oregon, Ohio found that wet cooling towers were the most cost-effective option for reducing both thermal discharges and fish kills from the plant's cooling system. (Tetratich, *Bay Shore Power Plant: Intake and Thermal Discharge NPDES Compliance Option Evaluation* (Feb. 2009), attached to Addendum as Ex. H.) This study found that "wet cooling towers may reduce the volume of water withdrawn from a particular source by as much as 98 percent depending on various site-specific characteristics and design specifications," with a directly proportional reduction of thermal discharges as a result. (*Id.* at 26.) A similar analysis of the available technologies and options for reducing thermal discharges at the Plant must be conducted before its NPDES permit can be lawfully renewed.

**Response 21:** We do not believe that an analysis of BAT for heat is required. Neither state nor federal law or regulation requires Ohio EPA to second-guess U.S. EPA's omission of heat from the BAT effluent guidelines, or to set its own BAT regulations. Ohio EPA has not chosen to set BAT for thermal discharges at the Stuart Plant primarily because we believe that the requirements to meet temperature standards in Little Threemile Creek and the Ohio River are more stringent than BAT would likely be. For example, cooling towers minimize the thermal load mainly by minimizing the discharge volume. They often do not meet temperature standards at the discharge point (as the permit requires for outfalls 001 and 002 if the discharge remains in LTMC). The thermal load limit for an Ohio River discharge would require substantial reductions in the effluent thermal load discharged, similar to the reductions that would occur if a cooling tower were installed.

#### Comments on Part I.C – Compliance Schedules

**Comment 22:** Part I.C.A of the draft permit contains schedule requirements pertaining to the implementation of options relating to proposed thermal discharge limitations for Outfalls 001 and 002. The second sentence in the introductory paragraph contains a typographical error — "effiective" should be "effective."

**Response 22:** This has been corrected in the revised permit.

**Comment 23:** The language included in Part I.C.A purportedly allows DP&L to pursue either Item A.1 or A.2 of the compliance schedule. The language of the permit is not clear that the pursuit of one option negates the requirement to comply with the other option. For example, the permit does not include language to the effect that if Item A.1 (related to achieving the final thermal effluent limitations in Little Three Mile Creek for Outfalls 001 and 002 as specified in Part I.A of the permit) is elected, then the requirements of Item A.2 (related to achieving the final thermal effluent limitations for a direct discharge to the Ohio River for Outfall 021) do not apply. DP&L requests that clarifying language be included in the permit specifying that the selection of either Item A.1 or A.2 in this section of the permit negates the requirements of the other option.

For both options, the permit specifies that DP&L submit to Ohio EPA Southeast District Office complete and approvable PTI applications and detailed plans no later than 12 months after the effective date of the permit. In addition the compliance schedule for each option lays out additional milestones for the completion of construction and status notification to Ohio EPA and US EPA regarding achieving the respective final effluent limitations. However, the permit does not impose any requirement upon Ohio EPA to act in a timely manner in approving the PTI application. Similarly, the draft permit does not recognize that other permitting authorities may be involved in whichever option DP&L elects. Specifically the U.S. Army Corps of Engineers may be called upon to issue a Clean Water Act §404 permit which in-turn would trigger the need for a Clean Water Act §401 water quality certification from Ohio EPA.

DP&L cannot be held responsible for meeting NPDES permit compliance schedule obligations if all of the requisite permits are not issued in a timely manner, or if a necessary permit is denied. Consequently DP&L requests that accommodations be made in the permit to make the compliance schedule for the completion of construction contingent upon the receipt of applicable permits. In the alternative, Ohio EPA could revise these compliance schedule requirements so that the milestones for the start of constructions, etc. are not triggered until all of the necessary regulatory permits have been issued.

**Response 23:** Clarifying language has been included in the revised permit to clarify the pursuit of one option negates the requirement to comply with the other option. We do not issue compliance schedule items that trigger on events or approvals outside the permit. It is the company's responsibility to evaluate the likelihood of getting approvals from other agencies when assessing the options in the compliance schedule.

**Comment 24:** Part 1.C.B of the draft permit includes compliance schedule requirements pertaining to the achievement of a Whole Effluent Toxicity limit of 1.0 TUa at Outfall 013 including the conducting of a Toxicity Reduction Evaluation. DP&L addressed these substantive requirements in an earlier section of these comments wherein it explained why the requirements are unlawful and unreasonable and the need for them to be removed from the permit

**before it is finalized. The applicable portions of the compliance schedule need to be removed from the permit for the very same reasons.**

**Response 24:** This item has been removed from the schedule. See response #10.

**Comment 25:** Part I.C.0 of the draft permit contains requirements for the development, submission and implementation of a plan to limit public access to the station's thermal discharge. The introductory paragraph of this section states that:

**The permittee shall submit an approvable plan to Ohio EPA for restricting human access to surface waters affected by the thermal discharge from the Dayton Power & Light's Stuart Station in accordance with the following requirements:**

**Does this imply that Ohio EPA approval is necessary prior to implementing the plan? If so, DP&L questions what constitutes an "approvable plan." What if Ohio EPA does not agree with the concepts DP&L proposes as part of the required plan? To DP&L's knowledge, there is no Ohio EPA procedure outlining the elements of an approvable plan and the criteria upon which agency approval would be granted or denied. DP&L cannot be held responsible for the timely implementation of a plan submitted in good faith and upon which Ohio EPA has provided no approval or timely feedback.**

**Response 25:** Approval of the plan will be based on Ohio EPA's best professional judgement. Ohio EPA will work with DP&L to resolve any disagreements over concepts proposed in the plan. Refer to response #27 regarding timely implementation of a plan.

**Comment 26:** Part I.C.C.2 of the draft permit contains the requirement:

**The plan shall propose strategies which will be implemented by the permittee to restrict human access to Little Threemile Creek and the thermal mixing zone at the confluence of the Ohio River and Little Threemile Creek *in order to prevent injuries to humans due to the temperature of the water.***

**DP&L requests that the highlighted language in the above requirement be removed as there is no factual basis for including it in the permit. Furthermore, the size and scope of the area of the river and discharge canal at issue appears to be unclear. DP&L needs a clear understanding of what Ohio EPA considers to be "the thermal mixing zone at the confluence of the Ohio River and Little Three Mile Creek" for the purposes of this permit requirement.**

**Response 26:** According to the US Consumer Product Safety Commission (CPSC), Document #5038, *Tap Water Scalds*, severe burns can occur in a matter of minutes at water temperatures above 120°F. CPSC also warns that water temperatures of 106°F can raise body temperatures to the point of heat stroke (US CPSC

release #79-071). The same release recommends pregnant women do not soak in water temperatures above 102°F. Effluent discharge temperatures have been reported by DP&L as high as 137°F (Outfall 001, 9/24/2010). This information indicates there is a basis for including the highlighted language in the permit.

The permit has been revised to state that DP&L must limit human access to the Ohio River and Little Threemile Creek from DP&L owned property. We have also changed the threshold temperature to 110°F to conform to ORSANCO standards.

**Comment 27: Part I.C.C.4 of the draft permit includes:**

**At a minimum, the study plan shall address and/or include the following elements:**

- a. ...
- b. ...
- c. warning signs shall be erected no later than May 1, 2012;
- d. ...
- e. ...
- f. the ability to restrict access with physical barriers shall be in place no later than May 1, 2012.

**DP&L request that the dates pertaining to these requirements be modified to become effective the first May 1 after the effective date of the permit since it is likely that the permit will become effective sometime after May 1, 2012 and the submission of a plan to Ohio EPA outlining limitations for public access is contingent upon the effective date of the permit.**

**Response 27:** We agree to change these dates to May 1, 2013.

**Comment 28: Part I.C.C.4.d of the draft permit requires:**

**the placement of physical barriers to restrict access to Little Three Mile Creek and the thermal mixing zone at the confluence of the Ohio River and Little Three Mile Creek when discharge temperatures exceed 106 degrees Fahrenheit (*sic*);**

**DP&L requests that "from the properties DP&L owns along the Ohio shoreline" be inserted after the word "access" in this requirement. Clearly DP&L has no authority to control public access in and on the Ohio River and even if it did have legal authority, from a logistics standpoint, there do not appear to be any mechanisms by which the company can enforce restricted physical access. In light of this, DP&L can only limit public access to these waters from property that DP&L owns and controls. Additionally, neither the permit nor the Fact Sheet includes any discussion or justification regarding the basis for 106°F being set as the discharge temperature at which public access is denied nor does it discuss how this requirement is to be monitored or measured. DP&L requests that Ohio EPA provide its reasoning for arriving at this value. In addition, DP&L**

would like the opportunity to discuss these requirements with Ohio EPA before the permit is finalized. DP&L requests that the temperature trigger be raised to 116°F. Data presented to ORSANCO during its standard-making process demonstrated that human health could be protected by a standard at this level.

**Response 28:** Ohio EPA agrees to include language in the permit restricting DP&L's obligations to company property. The basis for the 106°F being set as the discharge temperature at which public access is denied is based on CPSC's recommendation for hot tub temperatures not to exceed 104°F and their warning that heat stroke can occur from exposure to water temperatures of 106°F. The compliance schedule has been revised to state that the study plan submitted by DP&L under Item I.C.C.4 include a proposal for monitoring and measuring the temperature. We have also changed the temperature threshold to 110°F to be consistent with new ORSANCO standards. ORSANCO apparently rejected a 116°F standard – See Response #44.

**Comment 29:** Part I.C.D of the draft permit includes requirements associated with compliance with the mercury effluent limitations at Outfall 012. The section contains a minor typographical error. In Part I.C.D.1.c "thant" should be "than."

**Response 29:** The minor typographical error has been corrected in the revised permit.

**Comment: 30:** Parts I.C.D.1.b, c and d specify that construction must be initiated no later than 24 months after the effective date of the permit, that construction must be completed no later than 34 months after the effective date of the permit and that full compliance with the final effluent limitations for Outfall 012 be attained no later than 36 months after the effective date of the permit. Consistent with previous comments, DP&L cannot be held responsible for the timely compliance with a permit condition for which a timely PTI was submitted in good faith and upon which Ohio EPA has provided no approval or timely feedback. DP&L requests that the construction and effluent limitation compliance milestones contained within this section of the permit be grounded in the issuance of "all permits that are necessary" for DP&L to start construction of the project, not the effective date of the final NPDES permit.

**Response 30:** We have not made this change in the permit. See Response 23.

**Comment 31:** Part I.C.E of the draft permit includes requirements associated with the evaluation of the availability, cost effectiveness, and technical feasibility of technologies to reduce mercury, selenium and other metals associated with the Carter Hollow Landfill leachate discharge. DP&L has several concerns with the lack of clarity in the requirements included in Part I.C.E.1. Specifically, the draft permit states:

**Not later than 30 months after the effective date of this permit, the permittee shall submit to the Ohio EPA Southeast District Office a report on the results of a study to evaluate the availability, cost**

**effectiveness, and technical feasibility of best available demonstrated control technologies to further reduce mercury, selenium, and any other metals measured at elevated concentrations in the Carter Hollow Landfill leachate discharge.**

**DP&L does not believe that there is a reasonable factual basis for including these requirements in the permit. First, the landfill at issue has not yet been constructed - it is not clear whether a representative set of leachate monitoring data will be able to be assembled within the 30 month time period described above. The landfill will need to be constructed and operating for some time before representative leachate monitoring data can be collected and a study can be prepared. Further, this permit language appears to unreasonably assume that the study will justify the need for additional treatment and suggests that Ohio EPA has pre-judged this issue. This is both unreasonable and unlawful as Ohio EPA is required to base such decisions on the facts and Ohio EPA will not know what the facts are until the landfill is constructed and operating, leachate is produced, the leachate is monitored, and a study is prepared.**

**In addition, DP&L requests clarification on what is meant by "further reduce" and "elevated concentrations." If a specific metal discharge from Outfall 604 does not result in a reasonable potential for an exceedance of any associated water quality standard at the ultimate point of discharge to a receiving stream (Outfall 020), there should be no obligation for any evaluation of technologies aimed at its reduction. In addition, DP&L requests that the universe of metals required to be included in this permit condition be limited to those for which monitoring is required as listed in the table of monitoring requirements for Outfall 604 in Part I.A of the draft permit. Additionally, the draft permit specifies that:**

**After review of the permittee's report, Ohio EPA will notify the permittee of the treatment technologies that will be required to further reduce mercury and/or additional metals in the discharge.**

**If the study demonstrates that additional treatment is necessary, DP&L believes the selection of appropriate treatment technology rests with DP&L (possibly in consultation with Ohio EPA or as part of the PTI process) - Ohio EPA does not have authority to unilaterally dictate the technology to be installed for the control of pollutants absent technology based effluent guidelines. Furthermore, it is unlawful and unreasonable for Ohio EPA to issue a permit that suggests and assumes that additional treatment will be necessary when it lacks data supporting its position.**

**Response 31:** Treatment may be needed at Outfall 604 to fulfill the BADCT requirements of the Antidegradation Rule. OAC 3745-1-05(C)(2) states:

**"Except as provided in paragraph (D)(2) of this rule, any net increase in the discharge of a specific regulated pollutant resulting from a modification or new source shall, as a minimum, be controlled through**

best available demonstrated control technology relative to the specific regulated pollutant....”.

This requirement exists independent of the requirement to evaluate the discharge for reasonable potential to cause or contribute to excursions above WQS.

The discharge from this outfall has been identified as a net increase subject to the Antidegradation Rule, and BADCT requirements have not been waived under paragraph (D)(2) of the rule.

Ohio EPA does not consider combination with ash wastewaters to be BADCT treatment. Our experience with other landfills, particularly at the Gavin Plant, show that landfill leachate is higher in metals concentrations than bottom ash wastewater. These leachates contain metals concentrations that appear to be treatable. It is therefore likely that outfall 604 will have treatable concentrations of metals.

We acknowledge that there is a possibility that the proposed systems will be judged to be BADCT, if Outfall 604 does not show treatable concentrations of metals. We have added language to the compliance schedule that reflects this. See Response 34.

We have clarified some of the language requested. We have changed “elevated concentrations” to “treatable concentrations” to make this idea more precise. We do not believe that “further reductions” needs to be redefined because the language is intended to require an evaluation of a broad range of alternatives. We understand that treatment requirements must be economically achievable. Ohio EPA has listed three separate technologies as examples of what may be considered BADCT, and have been for other similar wastestreams. We know that other treatment systems may perform at the same level, and therefore could be considered BADCT.

**Comment 32:** Part I.C.E.2 specifies that a PTI "including detailed plans for the treatment technology(s) specified by Ohio EPA" be submitted no later than 36 months after the effective date of the permit. As discussed above, DP&L does not believe that the selection of the control technology is the purview of Ohio EPA. Moreover, the requirement to submit a PTI application to Ohio EPA within 36 months should not run from the effective date of this permit. Rather it should run from Ohio EPA's final review and approval of DP&L's study. This would allow DP&L to collect data and obtain Ohio EPA's feedback on the outcome of the study before it commits to the installation of a specific treatment technology (assuming the data suggest that additional treatment is necessary).

**Response 32:** We have not made this change to the permit. This should not be an issue because the Division of Surface Water has been reviewing almost all complete PTIs within 60 days. The permit can be modified or minor modified to change interim compliance dates if unforeseen circumstances cause PTI reviews to extend beyond the normal period. See also Response 23.

**Comment 33:** Part I.C.E.3 specifies that annual construction reports must be submitted to Ohio EPA beginning 12 months after the effective date of the permit. This requirement should commence 12 months after the beginning of construction and not with the effective date of the permit since the construction is contingent upon the issuance of a PTI which itself is contingent upon the submission of the evaluation study required by Part I.C.E.1 which is not due until 30 months after the effective date of the permit (per the draft permit).

**Response 33:** Part I.C.E.3 does not state that “construction reports” must be submitted. It states that “progress reports” must be submitted every 12 months. The progress reports required before construction begins should comment on the progress of the requirements under Part I.C.E.1 and 2. These progress reports are included partly to meet the requirement of federal rule 40 CFR 122.47(a)(3)(i), which prohibits interim compliance schedule milestones from being more than 12 months apart.

**Comment 34:** Part I.C.E.4 specifies that the construction of the treatment system(s) must be completed and placed into operation no later than 54 months after the effective date of the permit. Again, isn't Ohio EPA pre-judging this issue and putting the cart before the horse? As DP&L previously commented, Ohio EPA should require DP&L to monitor the leachate after the landfill begins operation. If representative data suggest that there are issues, then, and only then, Ohio EPA should require DP&L to perform a study. If the study confirms that a problem exists, then all of the other milestones should be based on Ohio EPA's acceptance of the treatment technologies that DP&L chooses through the issuance of a PTI. Imposing a requirement that requires DP&L to commit to installing and operating a new treatment system in the absence of a study or other data demonstrating that such treatment is necessary is both unlawful and unreasonable.

**Response 34:** We have included the phrase “if necessary” in this paragraph to allow for the possibility that treatment at outfall 604 is not needed.

**Comment 35:** Consistent with previous comments, DP&L cannot be held responsible for the timely compliance with a permit condition for which a timely PTI application was submitted in good faith and upon which Ohio EPA has provided no approval or timely feedback. DP&L requests that the construction and service date milestones contained within this section of the permit be based upon the issuance of a PTI by Ohio EPA, not the effective date of this NPDES permit.

**Response 35:** We have not made this change to the permit. See Response 32.

**Comment 36:** The revised draft permit contains a compliance schedule for DP&L to choose within six months to either meet thermal limits in Little Three Mile Creek or to remove the discharge from the creek and reroute it to the Ohio River to meet thermal limits. I, along with many others, feel it is environmentally and financially irresponsible to reroute cooling waste

**water from Little Three Mile Creek to a direct discharge into the Ohio River for the following reasons:**

- 1. Damage to aquatic life would be much greater with direct discharge in the Ohio River.**
- 2. The threat to human life would be much greater because of recreational boats and water skiers in close proximity to direct discharge and the greater depth of the river.**
- 3. The financial cost and the disruption effect of a huge rerouting project to gain a few degrees on thermal limits is logically not justifiable. The same thermal violation would still exist.**
- 4. Little Three Mile, before Meldahl Dam, was completely dry approximately three months a year except during high water and short run off period after heavy rain. No aquatic life existed there.**
- 5. Recreational fishing involving large numbers of fishermen from the state of Ohio and Kentucky and beyond would be destroyed. Fishing is excellent between late September through early May.**

**Response 36:** If DP&L moves the discharge to the Ohio River, the permit will require them to meet new thermal effluent limitations based on Ohio Water Quality standards. These standards are designed to be protective of human health and aquatic life. Ohio EPA must ensure that WQS are met at all times of the year, and that the Ohio River is fishable all year.

Any damage to aquatic life would need to be mitigated by lower temperatures to meet WQS, or improving mixing of the discharge so that aquatic life are more protected than they are now (under a Clean Water Act Section 316(a) demonstration, for example).

Ohio EPA has considered compliance costs generally by providing several options for meeting WQS. This allows DP&L to consider options before selecting the best alternative for them. These include meeting temperature limits for Little Threemile Creek, re-directing the discharge to the Ohio River and meeting temperature limits there, or re-directing the discharge to the Ohio River and justifying alternate thermal limits under Section 316(a) of the Clean Water Act. Under the Clean Water Act, Ohio EPA may not base water quality limits directly on cost-benefit analyses. The company may apply for economic variances from meeting temperature standards if they meet the criteria.

The condition of lower Little Threemile Creek before the construction of Meldahl Dam is not necessarily relevant to this permit. If the Stuart Plant were not there, it would look similar to the lower segments of other Ohio River tributaries in the area.

**Comment 37:** Part II.M specifies that outfall signage be posted at each outfall that is regulated by the permit. The draft permit contains several existing or proposed outfalls which are essentially internal outfalls to which the public has no access. These include Outfall 019 (ash landfill stormwater and leachate discharge into the wetland), Outfall 602 (chemical metal cleaning discharge to the bottom ash pond), proposed Outfall 603 (FGD bleed discharge to the bottom ash pond) and proposed Outfall 604 (Carter Hollow Landfill leachate and contact water). DP&L submits that since there is no reasonable expectation that members of the public would have access to these outfalls or be directly impacted by them, there is no need for outfall signage and requests that the signage requirement for those outfalls be removed from the permit.

**Response 37:** The permit has been revised to state that signage will only be required for outfalls 001, 002, 012, 013, and 020.

**Comment 38:** Part II.Y of the draft permit contains a requirement to submit certain information compiled pursuant to rules promulgated by US EPA on July 9, 2004 under §316(b) of the Clean Water Act. The language dictates that this information be submitted with the next NPDES permit renewal application (unless federal rules require an earlier submission date). DP&L requests that this requirement be removed from the permit and from pages 22-23 of the Fact Sheet given that the 2004 §316(b) regulations have been remanded and a new federal rulemaking is underway.

**Response 38:** We cannot make this change. While U.S. EPA is working on a new version of the Phase II 316(b) regulations, the data collection requirements remain the same. The purpose of the cited condition is to have data to evaluate the intake structure when the new federal rule comes out.

**Comment 39:** Part II.AE of the draft permit includes language relative to the pursuit of alternative thermal limits under Clean Water Act §316(a) and the submission of data/studies pertinent to the request. Included in this item is the following:

If alternative limits are accepted by Ohio EPA, the permit *may* be revised to include the alternative limits. (emphasis added)

DP&L expects that it would be incumbent upon Ohio EPA to revise the permit for the inclusion of alternate thermal limits should the agency accept and approve the submission of alternative thermal effluent limitations by DP&L. DP&L needs assurance that if it pursues a §316(a) variance demonstration, complies with the submission deadline and the variance demonstration satisfactorily justifies alternative thermal limits, that the approval will be granted in time to replace the proposed final thermal effluent limitations for Outfalls 001, 002 and 021.

**Response 39:** The permit has been revised to state “shall propose a modification to include the alternate limits” in place of “may”. The Agency cannot commit to approving alternate limits without predetermining the outcome of public participation.

Comments on Factsheet

**Comment 40:** Ohio EPA should add more information to the Fact Sheet about Outfall 603 and revise the Plant's schematic to clarify FGD wastewater discharges. Outfall 603 is described in the Fact Sheet as the outfall discharging wastewater from the FGD treatment system (Fact Sheet 21). However, this outfall does not appear on the Plant schematic or in the table of outfalls at the Plant. (Fact at 9-10 & Table 1). This makes the plan for FGD wastewater treatment and monitoring difficult to understand. Ohio EPA should provide additional information to explain where and how Outfalls 603 operates and update the plant schematic to enable robust public comment and analysis.

**Response 40:** The general location of outfall 603 and the wastewater monitored is provided in Part II, A of the draft permit. The schematic does not show the location because this monitoring station is new in this permit.

**Comment 41:** The section entitled "Assessment of Impact of Discharge on Receiving Waters" beginning on Page 12 of the Fact Sheet contains a number of troubling allegations with no empirical data to support them. The statement "Effluent temperatures, temperatures in Little Three mile Creek, and temperatures in the Ohio River at the confluence of Little Three mile Creek routinely exceed 40°C. (104°F.)" is included in the first paragraph on Page 12 of the Fact Sheet. DP&L finds this curious since DP&L is not aware of any routine monitoring of water temperatures occurring in either the discharge canal or the Ohio River. Similarly, without supporting data, Ohio EPA concludes on Page 12 of the Fact Sheet that "it is unlikely that fish or other indigenous aquatic life can survive in this stream during summer months when the instream temperatures are often above 98EF." The absence of reliance on any data continues on Page 13 of the Fact Sheet with a description of the June 28, 2007 ORSANCO sampling of the Ohio River downstream of the Stuart Station.

**Response 41:** This statement is based on effluent data reported by DP&L, the fact that lower Little Threemile Creek flows are almost entirely once-through cooling water from the plant, and monitoring surveys conducted by Ohio EPA and ORSANCO. The effluent frequencies over 40°C cited in the text support the statement. With essentially no flow from upper Little Threemile Creek to dilute or cool the discharge, these temperatures are an accurate approximation of temperatures in Little Threemile Creek downstream. Based on the field surveys, there is not a great deal of heat loss in LTMC between the discharge and the Ohio River.

**Comment 42:** Page 14 of the Fact Sheet includes the following statement:

ORSANCO's biological data indicates *[sic]* that the 316(a) requirements of a "balanced, indigenous community..." of aquatic organisms is *[sic]* not attained in the Ohio River downstream from the Stuart Station during summer months. During summer months, fish and aquatic life avoid an area downstream of DP&L, while in winter months, the fish and other aquatic life return and are attracted to the warmer temperatures.

DP&L finds this statement curious since it is contradicted by the immediately preceding bullet which says "Only one downstream site scored below the Ohio River Fish Index (ORFI<sub>n</sub>)..."<sup>9</sup> which actually indicates that a diverse, healthy population of fish are present downstream of the thermal discharge even in the summer. Furthermore, DP&L disagrees with Ohio EPA's apparent determination that thermal avoidance constitutes non-attainment of §316(a) criteria. The fact that fish and aquatic life migrate to zones of thermal preference does not indicate that a balanced, indigenous community is not being maintained. DP&L submits that this movement likely occurs naturally in other Ohio River locations not affected by artificial thermal discharges as organisms seek their preferred comfort zone.

**Response 42:** Though only one downstream site scored below the Ohio River Fish Index (ORFI<sub>n</sub>), all of the downstream sites scored significantly lower than the upstream reference zones. Downstream ORFI<sub>n</sub> scores were lower than upstream sites for at least ½ mile downstream from the LTMC confluence.

Ohio EPA has considered long-term avoidance by a representative species to be appreciable harm to aquatic communities since the late 1970's (Ohio EPA's Section 316 Guidance, September 30, 1978). Long-term avoidance by thermally sensitive species is a sign of an unbalance aquatic community. Section 316(a) demonstrations may allow for short-term avoidance, which is the temporary avoidance of an area or habitat caused by the onset of limiting or unfavourable environmental conditions. In other words a temporary avoidance is allowed during a limiting condition, such as a 7-day, 10 year low-flow event or other extreme condition – it is not meant to account for avoidance of an area during seasonal conditions that occur in most years, which appears to be the case downstream of the Stuart Plant.

**Comment 43:** Page 16 of the Fact Sheet includes a discussion of the wasteload allocation process including receiving stream flows. Part of this description includes the following:

For purposes of developing the waste load allocations, outfalls 001, 002, 609, and 012 were modeled as discharges to Little Threemile Creek in the backwaters of the Ohio River; therefore, these outfalls were treated as direct discharges to the Ohio River. The water in Little Threemile Creek would not normally include backwaters of the Ohio River, especially during low flow events for the Ohio River.

The first portion of this statement is a correct interpretation and supports DP&L's position that the discharge canal is not Little Three Mile Creek but is actually a discharge directly to the Ohio River (see previous discussion in this comment letter). However, DP&L is confused by the statement that the discharge canal would not normally include backwaters of the Ohio River. The normal pool elevation of the Ohio River is 485' above sea level (and has been so since the construction of the Meldahl Dam in 1965). As a consequence of the dam's construction and subsequent raising of the normal Ohio River pool elevation, absent the Stuart Station cooling water discharge, Ohio River water would extend up into the canal to the 485' elevation point. DP&L can only speculate that Ohio EPA meant that Ohio River backwaters would not extend up into the Little Three Mile Creek stream channel upstream of the station's cooling water discharge location which is accurate. DP&L addressed many of these same issues in the comments that it previously submitted to US EPA (Exhibit A); DP&L incorporates those comments herein.

**Response 43:** The fact sheet language contains errors from earlier fact sheets, written before the U.S. EPA objections were filed. In previous versions of the fact sheet, limits were developed assuming that lower Little Threemile Creek was a backwater of the Ohio River. We changed this assumption because U.S. EPA objected to the permit due to the lack of protection for Little Threemile Creek – Limits were not set to protect LTMC in earlier drafts.

The draft permit limits for outfalls 001, 002, 609 and 012 are set to protect LTMC. Temperature limits for outfalls 001 and 002 are water quality standards for Little Threemile Creek, reflecting the low dilution. Limits for outfalls 609 and 012 reflect their small contribution to the total discharge of the plant to LTMC, but still allow WQS to be met.

#### Additional Comments on the Permit

**Comment 44:** To accommodate operation of the plant as a cycling facility the thermal load limits should be expressed as a daily average value of hourly calculations, rather than an hourly maximum thermal load. In addition, the new 110°F temperature limit and new and lower thermal discharge limits are objectionable.

First, the 110°F limit should be removed from the permit. The limit appears to be grounded in a standard recently issued by ORSANCO which is both unreasonable and unlawful for several reasons. First, a multitude of data presented to ORSANCO during the standard-making process demonstrated that human health could be protected at 116°F instead of 110°F. Further, ORSANCO has neglected to provide the regulated community with any guidance explaining how the standard is to be implemented. Finally, ORSANCO has not provided DP&L or other members of the regulated community with an opportunity to seek judicial or administrative review of the standard. If Ohio EPA fails to remove this requirement from the permit, it should at least make it clear that it applies

**only to the Ohio River and not in DP&L's discharge canal. Further, the limit should not go into effect for 79 months so that it is consistent with the other requirements imposed on the thermal discharge.**

**Second, it appears that the winter thermal discharge limit for Outfall 021 was reduced from 5950 Million BTU/hour to 4280 BTU/hour. The Agency has failed to explain why this change was made, how it was calculated, and why it was necessary. Accordingly, the limit should be restored to 5950 MBTU/hour. Further, this limit should not become effective for 79 months so that it is consistent with other requirements imposed on the thermal discharge.**

**Response 44:** The permit has been revised to express the thermal limit as a daily average.

However, to prevent temporary exceedances of recreation standards, we have included a temperature maximum limit of 110°F. This is the new ORSANCO criterion applied at the discharge point because the specific mixing characteristics for a new Ohio River discharge are not known, and the current outfall configuration causes the discharge plume to quickly move across the surface of the river to the Kentucky bank. As the standard is meant to protect all areas of the Ohio River where recreation occurs, recreation could occur near the discharge under the current discharge configuration. If DP&L moves the discharge directly to the Ohio River, and changes the outfall configuration so that greater initial mixing occurs, we would be open to a modification of the limit based on the new mixing characteristics.

While Ohio EPA was not involved in reviewing the comments on ORSANCO's standards change, the correspondence seems to indicate that ORSANCO considered, and rejected, revising the contact standard to 116°F. We have clarified that the limit does not take effect until 79 months after the effective date.

**Comment 45:** DP&L requests that Ohio EPA consider issuing a renewal NPDES permit that does not contain an adverse determination with regard to the characterization of the plant's cooling water discharge canal. This renewed permit could expire in two years and would require DP&L to complete an updated 316(a) study, as well as an engineering options study prior to the expiration of the permit, without requiring the initiation of any costly capital projects. Additional measures addressing the thermal discharge could then be addressed during the next permit renewal and the outcome of both studies considered in the process.

**Response 45:** Taking this alternative would require the agency to find that the discharge does not have the reasonable potential to contribute to excursions of temperature standards in lower Little Threemile Creek. To us, the data clearly shows that reasonable potential exists. As a result, we believe that we are required to set temperature/thermal load limits for the discharge.

**End of Response to Comments**