

RESPONSE TO COMMENTS
REISSUANCE OF NPDES PERMIT NO. NH0020923
LITTLE BAY SEAFOOD, LLC and LORDCO PIER ASSOCIATES
NEWINGTON, NEW HAMPSHIRE

The U.S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) solicited public comments from April 25, 2008, through May 19, 2008, on the draft National Pollutant Discharge Elimination System (NPDES) permit for Little Bay Seafood, LLC (LBS) and Lordco Pier Associates located in Newington, New Hampshire. This permit is for the discharge of treated wastewater and storm water to the Piscataqua River from the LBS facility. In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's and the NHDES's responses to comments (RTC) received on the draft NPDES permit (NH0020923) during the Public Comment period. The response to comments explains and supports EPA's and the NHDES's determinations that form the basis of the final NPDES Permit issued to LBS. For the reader to understand EPA's and the NHDES's determinations, he or she should be familiar with the Draft Permit, the associated Fact Sheet, applicable federal National Pollutant Discharge Elimination System (NPDES) permit regulations and the State of New Hampshire's Water Quality Statutes and Administrative Rules. After consideration of these comments, the only revision made to the Draft Permit was a decrease in the monitoring frequency for Outfall 005.

Comments from Gregory A. Roscoe, LLC
for Little Bay Seafood, LLC (LBS) and Lordco Pier Associates

Editorial Note: All the comments contained in the Comment sections are quoted in full.

Comment No. 1:

Outfall 004: On Page 16 of the Fact Sheet, EPA asserts that the reported effluent discharge from Storm water Outfall 004 (22.4 ug/L TBT) was "well in excess of NH standards". Our comment is that the ambient water standards cited have consistently been misapplied to the effluent of this outfall by the regulatory agencies (NH and EPA). These standards are intended to be used as benchmarks to evaluate the health of the receiving body- in this case the Piscataqua River, not an effluent limit to be applied directly to discharges into the "River". Even though the effluent "daylights" at certain tidal cycles in the intertidal area, it is profoundly over conservative to apply standards intended for the receiving water body to discharges to it. Neither agency has made any attempt that we are aware of to assess the potential of this storm water discharge to adversely impact the Piscataqua River beyond applying the surface water standard to the effluent discharge. In addition, there are important aspects to the discharge such as duration, magnitude and frequency that are relevant to its importance (it's a storm water discharge) that to our knowledge, have not been taken into consideration. The significance of the storm water discharge represents a more complex phenomenon than represented in the material presented in the fact sheet and we recommend a more technically sophisticated justification for the statement presented.

Further, the "Conclusion and Permit Requirement" on page 17 states: "sampling conducted at LBS's Outfall 004 has demonstrated there is reasonable potential for a discharge of TBT from Outfall 004 to exceed NH's Water Quality Standards." In the NH Regulation for Surface Water 1703.21 (b); this section

states that the "concentration of toxic substances in all surface waters shall not exceed..." clearly stating its intended applicability to the receiving water body and not effluents to it. We contend that it is an inappropriate stretch to umbrella the effluent as "surface water" because it daylights in the intertidal area during low tide. EPA and the state have not demonstrated that Outfall 004 has contributions that would cause exceedances in the Piscataqua, only that its effluent would exceed a standard derived for surface water bodies- not at all the same thing.

The draft permit also imposes a TBT limit on Outfall 004 based on the approach of imposing surface water limits intended for the receiving body to the "end of the pipe". We challenge the validity of applying surface water standards as effluent limits based on the State of NH's own language and the intent of EPA'S AWQC to be applied as benchmarks for surface water bodies, not effluent.

In addition, EPA is requiring monthly sampling for an episodic discharge of limited duration for which there has been fairly consistent sampling data. Flow of storm water through Outfall 004 only occurs during significant rain events. The outfall is dry at other times. It is impractical, if not impossible to collect monthly samples especially during dry summer and winter seasons. Given that historical data do not show increasing discharge trends and there is no environmental reason to expect that discharges could increase, we challenge the technical rationale for requiring sampling events of this frequency. We believe that quarterly sampling is sufficient until remediation satisfactorily mitigates future discharges.

We also feel that EPA has not been strategic in using the NPDES process to manage storm water, a topic for which EPA has created its own unique management process through Storm Water Pollution Prevention Plans.

Response No. 1

The permittee makes several related comments regarding the Draft Permit's requirements for Outfall 004 and EPA's permitting approach for storm water. At the onset of Response No. 1 is a description of EPA's industrial storm water management approach in the context of LBS's discharges.

On October 30, 2000, EPA issued the "Final Reissuance of National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities" ("2000 MSGP"), which was effective on the date of issuance. The 2000 MSGP covered storm water discharges associated with industrial activities for many states, including New Hampshire. This General Permit was issued because it was impractical for the EPA or the States to issue an individual NPDES permit to every industrial facility that discharged storm water to the surface waters of the United States. Instead, EPA's strategic objective was to allow facilities which were required to apply for the 2000 MSGP to develop their own Storm Water Pollution Prevention Plan (SWPPP). Each facility that applied for the 2000 MSGP, using specific effluent limitations and guidance provided for specific individual industrial classes, could then develop a SWPPP to describe how that particular facility attains specific effluent guidelines and conditions.

LBS applied for and received coverage under the storm water Multi Sector General Permit (MSGP) effective January 18, 2001 (Permit NHR05A495) for storm water discharges from the LBS site. LBS was covered under the section of the 2000 MSGP for Miscellaneous Food Preparations and Kindred Products. The 2000 MSGP contained a variety of terms and conditions, with additional specific

conditions contained in the Miscellaneous Food Preparations and Kindred Products section of the General Permit, designed to ensure the implementation of practices to reduce the pollutants in storm water discharges to the Piscataqua River associated with industrial activity at LBS. Section 4 of the 2000 MSGP requires the permittees to develop and implement a SWPPP for their site. Among other things, the SWPPP must identify potential sources of pollution which could reasonably affect the quality of the storm water discharges, and must describe and ensure implementation of practices to decrease pollutants in storm water.

Section 4.2.4. of the 2000 MSGP requires that the SWPPP identify each area at a facility where industrial materials or activities are exposed to storm water. The SWPPP for the LBS site, dated June 2002, identified the "Trap Dipping" area of the Site as such an area. Further, Section 4.2.7. of the 2000 MSGP requires that the SWPPP describe the type and location of best management practices ("BMPs") selected for each of the areas where industrial materials or activities are exposed to storm water. The June 2002 LBS SWPPP identified the following BMPs in the "Best Management Practices" section:

- 1) Cover the trap dipping operations.
- 2) Construct concrete pad with spill grooves and check for chemical periodically. Place the trap dipping tank and drying table on concrete pad.
- 3) Outdoor storage of trap dipping chemicals should have containment if they do not already.
- 4) Remove trap dipping operation from site

It is clear from the above BMPs that LBS understood the toxicity of the tributyl tin (TBT) used for dipping traps, and were aware of the potential for TBT to reach the stormwater catch basin. However, from at least June 2002 until May 7, 2004, LBS failed to fully implement the SWPPP by discharging storm water associated with industrial activity to a "water of the United States" and did not implement the BMPs described in its SWPPP related to the trap dipping operation. LBS discharged to the Piscataqua River from Outfall 004 storm water containing pollutants including TBT from the wood lobster trap dipping operation that occurs at the trap dipping area of the Site. EPA issued LBS *Finding of Violations and Order Compliance*, Docket No. 06-26, detailing how the LBS failure to implement a SWPPP violates the terms and conditions of a permit issued pursuant to Section 402 of the CWA, 33 U.S.C. § 1342, and therefore, is in violation of Section 301(a) of the CWA, 33 U.S. C. § 1311(a).

It was commented that, "Neither agency has made any attempt that we are aware of to assess the potential of this storm water discharge to adversely impact the Piscataqua River beyond applying the surface water standard to the effluent discharge." In cases where a toxic chemical (and in this case a persistent chemical) is being discharged from a privately owned outfall, it is the responsibility of the regulatory agencies to regulate such discharges with a goal of preventing any further discharges of such chemicals in order to preserve or restore water quality. With a great number of industries discharging numerous chemicals to surface waters of the United States, it is infeasible for EPA to conduct individual studies on privately owned outfalls. The basis of water quality standards is setting protective limits to avoid adverse impacts from occurring.

LBS failed to properly implement their own SWPPP and caused the discharge of TBT to the Piscataqua River. Therefore the EPA decided to issue an individual NPDES permit for discharges

from Outfall 004. The regulation of the discharge at Outfall 004 is based on provisions in the Clean Water Act Section 402 (p) as implemented by 40 C.F.R. 122.26, and the NH Revised Statutes Annotated (RSA 485-A:8 and RSA 485-A:13) as discussed below. Specifically, 40 Code of Federal Regulations (C.F.R.) 122.26(a)(v) states that a storm water discharge determined by EPA to contribute to a violation of a water quality standard or determined to contribute pollutants to waters of the United States is subject to NPDES permit requirements.

According to NH statutes, the contribution of pollutants to surface waters is prohibited:

- **485-A:8 Standards for Classification of Surface Waters of the State.** It shall be the overall goal that all surface waters attain and maintain specified standards of water quality to achieve the purposes of the legislative classification.
- **485-A:8 II.** There shall be no disposal of sewage or waste into said waters except those which have received adequate treatment to prevent the lowering of the biological, physical, chemical or bacteriological characteristics below those given above, nor shall such disposal of sewage or waste be inimical to aquatic life or to the maintenance of aquatic life in said receiving waters
- **485-A:13 I. (a).** It shall be unlawful for any person or persons to discharge or dispose of any sewage or waste to the surface water or groundwater of the state without first obtaining a written permit from the department of environmental services.

Further, the NH Surface Water Quality Regulations prohibit the contribution of pollutants to surface waters as outlined in the following:

- **Env-Wq 1703.03 (a)** states “The presence of pollutants in the surface waters shall not justify further introduction of pollutants from point and/or nonpoint sources.
- **Env-Wq 1703.21 (a) (2)** requires that all surface waters be free from toxic substances that persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.

It was further commented, “The draft permit also imposes a TBT limit on Outfall 004 based on the approach of imposing surface water limits intended for the receiving body to the end of the pipe. We challenge the validity of applying surface water standards as effluent limits based on the State of NH's own language and the intent of EPA'S AWQC to be applied as benchmarks for surface water bodies, not effluent.” When developing the TBT effluent limits for Outfall 004, EPA and NHDES employed the regulation found in 122.44(d)(1)(i) - (ii) for calculating water quality limits. This approach considered the New Hampshire TBT acute aquatic life water quality standard of 0.4 micrograms per liter, the variability of the discharge and dilution of the effluent in the receiving waters.

In determining the dilution of the effluent in the receiving water (See 40 CFR Section 122.44(d)(1)(ii)) the EPA and NHDES use the procedure contained in U.S. EPA NPDES Permit Writers' Manual (EPA-833-B-96-003, December 1996, pg. 101). When conducting an effluent

characterization to determine if water-quality based effluent limits are needed for specific chemicals, the permit writer projects the receiving water concentration of pollutant(s) contained in the effluent once that effluent enters the receiving water (U.S. EPA NPDES Permit Writers' Manual, EPA-833-B-96-003, December 1996, pg. 100). EPA may use a simple water-quality model when performing this analysis (See U.S. EPA NPDES Permit Writers' Manual, EPA-833-B-96-003, December 1996, pgs. 101-102). The water-quality model (or basic mass balance water-quality equation) is as follows:

$$Q_d C_d + Q_s C_s = Q_r C_r \quad (1)$$

where:

Q_d = discharge flow

C_d = pollutant concentration in effluent

Q_s = background stream flow above point of discharge

C_s = background in-stream pollutant concentration

Q_r = resultant in-stream flow, after discharge = $Q_d + Q_s$

C_r = resultant in-stream pollutant concentration in the stream (after complete mixing)

For this permit, EPA assumed that the term representing background in-stream pollutant concentration (C_s) equals zero, so the product of the stream flow above the point of discharge and background pollutant concentration ($Q_s C_s$) also equals zero. Therefore, for this permit, the above equation can be rearranged algebraically as follows:

$$Q_d C_d = (Q_d + Q_s) C_r$$

$$C_r = Q_d C_d / (Q_d + Q_s) \quad (2)$$

In the above equation, the term " $Q_d + Q_s$ " represents the dilution provided by the receiving water. As can be seen in the above equation, the background stream flow is an important factor in establishing the appropriate effluent limits.

EPA establishes water quality based permit limits at the end of pipe. The pipe conveying the discharge of Outfall 004 terminates above the Piscataqua River, i.e., the discharge pipe is exposed. The preceding mass balance equation that is used to determine effluent limitations can not be employed to determine Outfall 004's effluent limit for TBT. A point discharge to an intertidal zone of a receiving water which then flows to the main stem of that receiving water is not afforded the proper mixing, i.e., dilution, for that effluent. This is due to a number of factors. During the period of time when the effluent discharges directly to Piscataqua River bank, the aquatic organisms living in this area are continuously exposed to 100% of the effluent. Additionally, a properly designed outfall should provide ample momentum to dilute effluent in the receiving water as quickly as possible. The first stage of mixing is controlled by the discharges momentum and buoyancy of the effluent. A submerged outfall benefits from the initial momentum and buoyancy of the plume, thereby, providing the initial mixing. LBS exposed Outfall 004 provides no buoyancy or initial momentum, therefore, it provides no benefit of initial mixing for the effluent with the receiving water.

Additionally, TBT persists in the soil of LBS facility. Storm water entrains TBT polluted soil and carries it to Outfall 004, a storm water discharge. The exposed Outfall 004 is merely transferring TBT from a “hot spot” on the LBS facility to the intertidal area of the Piscataqua River. This is a violation of New Hampshire’s water quality standards; specifically Env-Wq 1703.21 (a) (2). No dilution factor, therefore, was applied to the TBT aquatic life water quality standard. This results in the issued permit containing an effluent limit of 0.4 micrograms per liter for Outfall 004.

Another comment was, “In addition, EPA is requiring monthly sampling for an episodic discharge of limited duration for which there has been fairly consistent sampling data. Flow of storm water through Outfall 004 only occurs during significant rain events. The outfall is dry at other times. It is impractical, if not impossible to collect monthly samples especially during dry summer and winter seasons. Given that historical data do not show increasing discharge trends and there is no environmental reason to expect that discharges could increase, we challenge the technical rationale for requiring sampling events of this frequency. We believe that quarterly sampling is sufficient until remediation satisfactorily mitigates future discharges.”

TBT sampling data from Outfall has actually demonstrated that TBT levels are variable, not “show(ing) increasing discharge trends.” If LBS is not able to collect a proper storm water sample from Outfall 004, it is appropriate to annotate the monthly Discharge Monitoring Report (DMR) stating that it was not possible to collect a proper storm water sample. EPA notes that the issued permit does not compel LBS to sample Outfall 004 outside normal business hours. There is nothing preventing LBS, particularly after voicing concern at the difficulty in collecting a proper storm water sample, to have a sampler ready to respond to a storm event that does not occur during normal business hours. Finally, the monthly sampling frequency remains in the issued permit. Given the observed variability in TBT concentrations from past sampling events, EPA and NHDES considers quarterly sampling, as requested by LBS, insufficient to characterize the discharge.

Comment No. 2

Outfall 005: On Page 18 of the Fact Sheet regarding Outfall 005 (an outfall which conveys effluent from a French drain adjacent the LBS foundation), EPA states it "considers it prudent to obtain more samples from the groundwater draining from Outfall 005 to better determine the effects of this VOC contamination on the water quality of the Piscataqua River. "

EPA has failed to consider the potential effects of the effluent on the River based on what is already known. EPA has no Ambient Water Quality Criteria for chlorinated solvents and the NH Surface Water Quality Standards are far above effluent levels by orders of magnitude. In other words there is no realistic probability that the existing contaminant profile coming from Outfall 005 has the potential to adversely affect the Piscataqua River in any measurable way.

Outfall 005 has been sampled four times for VOC profiles and the results have been consistently low and significantly below NH Surface Water Quality Standards. We assert an adequate profile has been established for effluent from Outfall 005 and that it presents negligible environmental concerns to surface water.

Given the absence of any discernable impact of this discharge on the Piscataqua at current levels, the specified requirement to monitor monthly will not provide essential new information necessary to assess its future impact and is considered arbitrary and without adequate foundation based on current

data and trend. We request that the monthly sampling requirement for Outfall 005 be eliminated.

Response No. 2:

Outfall 005 is connected to a “French drain” on the permittee’s property. The discharge possibly contains both groundwater and storm water, and is contaminated with chlorinated organic compounds. The surface water quality criterion for tetrachloroethene, based on the fish consumption criteria, is 8.85 micrograms per liter (ug/L). The samples collected in June and July 2007 contained 7 ug/L; which are below surface water quality standards; however, a recent sample contained 11 ug/L.

The sampling results show variable contaminant levels, demonstrating volatile organic compounds (VOCs) are still entering the Piscataqua River from Outfall 005. EPA and NHDES, therefore, have determined that it is appropriate to continue conducting quarterly sampling. Accordingly, the issued permit specifies three additional sampling events and the calendar quarters that sampling will occur.

This quarterly sampling will assist EPA in determining whether the continued industrial discharge from Outfall 005 poses a threat to the Piscataqua River. If the quarterly sampling indicates there is a reasonable potential to cause or contribute to exceeding any State of New Hampshire water quality criterion for the Piscataqua River, the permit may be modified, or alternatively, revoked and reissued to incorporate additional testing requirements or chemical specific limits. These actions will occur if the EPA determines the NH Standards are not met and/or uses of the waterways are not adequately protected. Results of these tests are considered "new information not available at permit development"; therefore, the permitting authority is allowed to use said information to modify an issued permit under authority in 40 CFR §122.62(a)(2).

Comment No. 3

Outfall 002: On page 25 of the Fact Sheet, EPA describes two composite sampling regimens "to continue to monitor and detail the effluent from Outfall 002" (Bait Fish Processing effluent) "Although EPA has determined the industrial discharge from the Outfall 002 of fish processing waste does not pose a threat to the Piscataqua River..."

Although it may be interesting to evaluate loading under different design scenarios, we recommend that EPA limit its requirement for composite sampling to that which would characterize the maximum effluent concentrations (worst case). Given that it has already been determined that the discharge does not pose a threat, it seems more academic than necessary to require two different composite protocols.

Response No. 3:

The commenter quoted the EPA Fact Sheet that "... EPA has determined the industrial discharge from the Outfall 002 of fish processing waste does not pose a threat to the Piscataqua River ..." The full quote is, "Although EPA has determined the industrial discharge from Outfall 002 of fish processing waste does not pose a threat to the Piscataqua River, the Agency considers it prudent to continue to monitor and detail the effluent from Outfall 002." LBS was directed by the EPA to collect Outfall 002 effluent data on a weekly basis for the last six months of 2006, and quarterly through 2007. As thoroughly detailed in the Fact Sheet, the components tested for in Outfall 002's effluent demonstrated considerable variation in the water quality of the effluent.

EPA and NHDES based their assessment of a threat to the Piscataqua River on the data gathered from Outfall 002 (fish processing waste). EPA and NHDES consider it is necessary to ensure the sampling protocol is consistent and provides representative data for Outfall 002's effluent. Therefore, the draft permit provided instructions for sampling. The sampling guidance accounts for both acute and chronic component of the baitfish wetting operation. Samples for the acute component are taken during the first 20-minutes when the baitfish containers are initially emptied and the fish gurly from those containers drains in Outfall 002. This point of the baitfish wetting process is when the highest, i.e., acute, effluent component concentrations occur. The chronic loading samples are taken at 30-minutes intervals during the entire baitfish wetting operation. These sampling points of the baitfish wetting process will provide an indication of the long term, i.e., chronic, effects. Samples collected are to be analyzed for seven parameters; BOD₅, TSS, Ammonia Nitrogen, Total Kjeldahl Nitrogen (TKN), Nitrate, Total Phosphorous (TP), and Oil and Grease (O&G).

This more vigorous sampling regime will assist EPA in determining whether the continued industrial discharge from Outfall 002 poses a threat to the Piscataqua River. If the more rigorous sampling regime indicates there is a reasonable potential to cause or contribute to exceeding any State of New Hampshire water quality criterion for the Piscataqua River, the permit may be modified, or alternatively, revoked and reissued to incorporate additional testing requirements or chemical specific limits. These actions will occur if the EPA determines the NH Standards are not met and/or uses of the waterways are not adequately protected. Results of these tests are considered "new information not available at permit development"; therefore, the permitting authority is allowed to use said information to modify an issued permit under authority in 40 CFR §122.62(a)(2).

Comment No. 4

A SPECIAL CONDITION based on NH DES Policy will require a single port diffuser on the end of Outfall 002 to increase discharge velocity. While we accept the SPECIAL CONDITION we request that the annual state requirement for underwater videography of the terminus be flexible enough to allow a time sequence of digital photographs to fulfill the videography requirement. Such flexibility will be cost effective for the permittee and also provide the necessary visual documentation requested by the state.

Response No. 4:

It is NHDES policy to require an annual underwater videography of any diffuser discharging effluent into the coastal waters of New Hampshire. NHDES requires evidence that the diffuser is thoroughly and quickly mixing Outfall 002's effluent after discharge to the Piscataqua River.