

CSX Transportation, Inc. Beacon Park Yard in Allston, MA Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0025704

Introduction:

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permit (MA0025704). The responses to comments explain and support the EPA determinations that form the basis of the final Permit. The CSX Transportation, Inc. (CSXT) Beacon Park Yard draft permit public comment period began March 24, 2005 and ended on April 22, 2005. This document refers to the below Commenters by numbers designated. Comments were received from:

1. CSXT, the operator of the facility,
2. The Commonwealth of Massachusetts Riverways Programs,
3. The Charles River Watershed Association, and
4. Mr. Roger Frymire, a concerned citizen.

No commenter requested a Public Hearing and EPA determined that a public hearing was not warranted. EPA further determined that the comments could be adequately addressed in this response to comments. The comments requested clarifications and further explanations of information in the fact sheet. Since the fact sheet is a final document, no changes were made. Instead, the comments were noted and a response to them is included in this document.

The final Permit is substantially identical to the Draft Permit that was available for public comment. Although EPA's decision-making process has benefitted from the various comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the final Permit. However, a few improvements and changes are detailed in this document and reflected in the final Permit. A summary of the changes made in the final Permit is listed below. The analyses underlying these changes are explained in the responses to individual comments that follow.

1. As a point of clarification, three subsidiaries of a parent company, CSX Corporation, operate at the Beacon Park Yard. The final Permit only covers two discharges from the approximately 4-acre CSX Transportation location. Two other subsidiaries of CSX Corporation, CSX Intermodal and Flexi-Flo, also operate on abutting property. This final Permit does not give any rights to these subsidiaries to discharge any storm water or process water to waters of the United States. Since CSX Transportation chose to only permit its operation, each subsidiary must obtain any applicable storm water permit or individual NPDES permit as necessary to operate on those properties. This includes obtaining separate storm water permits for each subsidiary under the Multi-Sector Storm Water General Permit (MSGP). In Section I.A.13 of the final Permit the following language has been added, "The final Permit only covers two discharges from the approximately 4-acre CSX Transportation location. See the shaded area of Figure 1 (Locus Map for CSX Transportation, Inc., Permit No. MA0025704, Allston, MA) that is attached to this Permit." As previously stated, Figure 1 has been added as an attachment to the final Permit.

2. The street address for the facility has been changed from 60 Pearl Street to 170 Cambridge Street in Allston. Additionally, on the first page of the final Permit EPA added that the final Permit supercedes both the permit issued on September 30, 1987 and the permit conditions for the groundwater treatment system discharge set out in an EPA permit exclusion letter dated June 23, 1994.

3. In the Effluent Limitations and Monitoring Requirements section of the final Permit for Outfall 001A (Part I.A.1), EPA has changed the sampling frequency for O&G from once per month to once per week. A footnote was added as Footnote 5 to document the requirements for weekly sampling for O&G and the other numbers for the footnotes from the Draft Permit were renumbered in the final Permit.

4. For the continuous pH monitoring at 001A and 002A, the following paragraph has been added to Footnotes 7 and 11:

"A Permittee that continuously monitors the pH of its waste water within an applicable range shall meet that range, except excursions are permitted subject to the following limitations: (1) the total time during which the pH values are outside the required ranges shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes. The Director may adjust the requirements for the length of an individual excursion, if a different period of time is appropriate based upon the treatment system, plant configuration or other technical factors. An excursion is defined as an unintentional and temporary incident in which the pH value of the discharge waste water exceeds the limit for pH."

5. The SWPPP shall include the requirement that "CSXT shall include a map that delineates all known or suspected storm water pipes that run through its property and to note where the pipes connect," in Part II.5.a.i of the final Permit.

Response to Comments on the Draft NPDES Permit

Many comments were similar in nature. For administrative convenience the similar comments are paraphrased below and EPA provides the following responses.

Comment 1: The operator of the facility, CSXT (Commenter 1), asked to change the address of the facility from 60 Pearl Street to 170 Cambridge Street and to add that this final Permit will supercede both the permit issued on September 30, 1987 and the permit conditions for the groundwater treatment system discharge set out in an EPA permit exclusion letter dated June 23, 1994.

Response 1: The address change from 60 Pearl Street to 170 Cambridge Street is made to up date the actual location of the facility. Additionally, EPA intended that the permit exclusion letter would no longer apply after this final Permit becomes effective. Therefore, EPA has added the language that CSXT requested to the first page of the final Permit to avoid confusion.

Comment 2: CSXT (1) requested the maximum daily flow rate for Outfall 001A be set at 225,000 gallons per day and to monitor flow on a once per week basis.

Response 2: EPA believes that CSXT can operate at a maximum daily flow rate of the proposed 130,000 gallons per day based on all the reasons set out in the Fact Sheet issued with the Draft Permit on March 24, 2005 (date of public notice). Using two years of data and applying a statistical analysis, EPA calculated a Maximum Daily Flow Rate of 130,000 gallons per day using a 99% confidence level. CSXT is capable of operating the system at this flow rate by limiting the flow from the pumps feeding the two 18,000-gallon retention basins before the last oil/water separator. During storm events any additional storm water entering the system can back-up into the drainage system until the treatment system catches up with the additional flow. The treatment system has been able to operate below this flow rate without causing flooding to the facility.

CSXT is being required to continuously monitor the flow rate. Currently, CSXT monitors and records the flow rate continuously at Outfall 001A. This final Permit requires CSXT to continue to continuously monitor flow rate. The data from continuous monitoring will provide a more accurate record of the amount of water treated and discharged to Salt Creek Chamber, which leads to the Charles River. The only costs associated with operating the system are for maintaining and calibrating the existing system. The information will be useful for future permitting of the outfall by providing accurate data to calculate parameters, such as the actual pollutant loading to the river.

Comment 3: CSXT (1) requested EPA to eliminate the requirement to monitor Outfall 001A for temperature based on its belief that the temperature should reflect atmospheric (ambient) conditions because the effluent is made up of storm water.

Response 3: EPA agrees that during a storm event the majority of the effluent is mainly comprised of storm water. However, during dry periods the majority of the effluent could be made up of the waste water discharge from the Car Shop. According to a telephone conversation with Bob Evers at the CSXT facility in Allston on December 10, 2004, the floors of the Car Shop are washed down approximately twice per week with a portable steam washer that generates an approximately 400 to 500 gallons of waste water that mixes in the storm drainage system and flows to the Outfall 001A oil/water separator. Since steam (and no detergents) is used to clean the floors and work area, the temperature of the effluent could be effected during periods of dry weather. Currently, CSXT does not monitor the effluent for temperature. Therefore, there is no data to confirm whether the steam cleaning has any effect on temperature. This final Permit requires CSXT to monitor the effluent temperature.

Additionally, CSXT shall monitor the temperature continuously. The temperature can change due to the intermittent steam cleaning performed at the Car Shop. Since steam cleaning is done only periodically, continuous monitoring will be able to record the effect with time. Daily monitoring of temperature would not be frequent enough to show the intermittent effect that steam cleaning may have on the temperature of the effluent at 001A. If the information during this permit cycle suggests that the effluent temperature is reflective of only ambient conditions, EPA can then reevaluate whether continuous monitoring of temperature at the effluent is necessary.

Comment 4: CSXT (1) requested that EPA change the pH range and the testing frequency at Outfall 001A.

Response 4: The pH range cannot be changed because the range chosen are based on the Massachusetts Water Quality Standards for Class B waters according to 314 CMR § 4.05(3)(b)3. The Charles River has been classified as a Class B water. The Draft Permit requires CSXT to meet a range of 6.5 to 8.3 standard units. This range is required by the Massachusetts Surface

Water Quality Standards. The standard also states that the pH should not be "more than 0.5 units outside of the background range" of the receiving water. This is required for state certification of the final Permit.

This oil/water separator treatment system treats a combination of waste water and storm water. The water being treated is non-homogeneous for periods of wet weather and long periods of dry weather. Therefore, to assure CSXT meets the pH requirement throughout different conditions, CSXT shall monitor pH continuously. Since the pollutants in the storm water and waste water mixture are hydrocarbons, the pH can be effected by the contaminants present. Furthermore, pH can effect the separation of the oil layer from the water layer. Continuous monitoring of pH is relatively inexpensive. Therefore, CSXT shall continuously monitor pH and shall be required to meet a pH range of 6.5 to 8.3 standard units at Outfall 001A.

Comment 5: CSXT (1) requested that EPA eliminate the effluent limit for benzene for Outfall 001A because it is not a suspected constituent associated with storm water. One commenter (3) asked why the Fact Sheet used a benzene limit of 5.0 micrograms per liter (ug/l) versus the 51.0 ug/l used in the Draft Permit.

Response 5: EPA disagrees with two aspects of CSXT's comment. First, CSXT infers that only storm water is discharged at Outfall 001A. This is untrue since the discharge from the Fuel Pad after two oil/water separators and the non-treated oil-contaminated wash water from the Car Shop combine with the storm water drainage system. This combined flow is then pumped to the retention basins and treated by the final oil/water separator before being discharged at Outfall 001A.

Secondly, the waste water from the Fuel Pad is contaminated with diesel fuel. Diesel fuel contains benzene as well as xylene, ethyl benzene and toluene. As explained in the Fact Sheet, EPA chose benzene as the indicator compound due to its toxicity and its solubility with water. Literature on diesel fuel states that fuel oil contains benzene at an average of 290 milligrams per liter (or 290,000 ug/l).

Additionally, CSXT maintains a groundwater treatment system with effluent limits for benzene and benzene, ethyl benzene, toluene, and xylene. These pollutants in the groundwater are, at least in part, from historical spills of diesel fuel. The influent monitoring at Outfall 002A confirms that benzene is detected from the contaminated groundwater. Based on the pollutants detected at 002A from the diesel fuel spills, the same types of pollutants are expected to be present from diesel fuel spills at the Fuel Pad. The storm water and pollutants from the Fuel Pad mix with the storm water drainage system after some treatment. Ultimately, these same types of pollutants have the potential to be present at Outfall 001A.

The first paragraph of Section IV.E.6 (page 15) of the Fact Sheet states that the effluent limit at 001A for benzene is 5.0 ug/l. This is a typographical error. The fact sheet should have stated the effluent limit to be 51.0 ug/l. Throughout the rest of this section EPA only refers to effluent limit as 51 ug/l. Since the Fact Sheet is a final document and the Draft Permit contained the proper effluent limit of 51.0 ug/l, no changes will be made to the final Permit. However, this Response-to-Comments clarifies that EPA meant to

state in the Fact Sheet that the effluent limit at 001A for benzene is 51.0 ug/l. CSXT is required to meet the effluent limit of 51.0 ug/l for benzene at Outfall 001A in the final Permit.

Comment 6: CSXT (1) requested that EPA change the maximum daily flow rate at 002A from the Draft Permit rate of 165,600 gallons per day (gpd) to 172,800 gpd in the final Permit.

Response 6: EPA chose the Draft Permit limit based on the maximum capacity of the groundwater remediation treatment (GWRT) system. EPA is unwilling to increase the maximum daily flow rate above the current pumping capacity. EPA would require additional information for an expansion of the system including, but not limited to, capacity of the new pumps, ability of the activated carbon treatment system to handle the additional flow, and the expected concentration of pollutants from the expansion. Therefore, EPA shall restrict the flow rate in the final Permit at Outfall 002A for the GWRT system at a Maximum Daily Flow Rate of 165,600 gpd. Additionally, any expansion of the GWRT would require CSXT to request a modification to the final Permit in accordance with 40 C.F.R. § 122.62.

Comment 7: CSXT (1) requested that the monitoring and recording of the flow rate at Outfall 002A be once a week using a daily maximum rate.

Response 7: EPA denies the request to only monitor the flow rate once per week. EPA requires CSXT to continuously monitor and record and report the flow rate at Outfall 002A. Additionally, CSXT is required to report on Discharge Monitoring Reports (DMRs) the maximum daily flow rate and the average monthly flow rate on a monthly basis. EPA bases many of the effluent limits for Outfall 002A on the Region I Remediation General Permit (RGP). The RGP requires a permittee to continuously monitor for flow rate. Therefore, CSXT is required to continuously monitor the flow rate to be consistent with the RGP.

Furthermore, the data from continuous monitoring will provide a more accurate method to calculate the amount of water being treated and discharged to Charles River Chamber, which leads to the Charles River. Previously in the EPA permit exclusion letter dated June 23, 1994, CSXT was not required to report the flow rate. The information will be useful for future permitting of the outfall and provide an accurate method of calculating the actual pollutant loading to the river.

Comment 8: CSXT (1) requested that EPA change the pH range and the testing frequency at Outfall 002A.

Response 8: Similarly to Response 4, the pH range cannot be changed because the range chosen are based on the Massachusetts Water Quality Standards for Class B waters according to 314 CMR § 4.05(3)(b)3. The Charles River has been classified as a Class B water. The Draft Permit requires CSXT to meet a range of 6.5 to 8.3 standard units. The standard also states that the pH should not be "more than 0.5 units outside of the background range" of the receiving water. This is required for state certification of the final Permit.

Since the groundwater being pumped consists of a water layer and a floating layer of hydrocarbons, the pH can be effected by the contaminants present. Furthermore, pH can effect the separation of the oil layer from the water layer. Continuous monitoring of pH is relatively inexpensive. Therefore, CSXT shall continuously monitor pH and shall be required to meet a pH range of 6.5 to 8.3 standard units at Outfall 002A.

The Draft Permit failed to include a regulatory limitation for continuous pH monitoring at Outfalls according to 40 C.F.R. § 401.17. The following footnote shall be added to the final Permit for the continuous monitoring of pH that is being performed at both Outfalls 001A and 002A:

"A permittee that continuously monitors the pH of its waste water within an applicable range shall meet that range, except excursions are permitted subject to the following limitations: (1) the total time during which the pH values are outside the required ranges shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes. The Director may adjust the requirements for the length of an individual excursion, if a different period of time is appropriate based upon the treatment system, plant configuration or other technical factors. An excursion is defined as an unintentional and temporary incident in which the pH value of the discharge waste water exceeds the limit for pH."

Comment 9: CSXT (1) requested that EPA eliminate effluent limits for naphthalene, methyl tertiary-butyl ether (MTBE), and Priority Pollutants for Outfall 002A. Furthermore, CSXT believes that 5 ug/l for benzene is conservative and the Total Suspended Solids (TSS) should be increased from 30 mg/l to 100 mg/l.

Response 9: Naphthalene, MTBE, and benzene are required to be monitored to be consistent with the Region I Remediation General Permit (RGP). According to the same rationale in the Fact Sheet, CSXT is being required to meet effluent limits for naphthalene, MTBE and benzene at Outfall 002A. Under the RGP the levels chosen are consistent with the Fuel Oil Remediation limits, which includes diesel fuel contaminated sites. In this case, the technology being used, granulated activated carbon (GAC), can meet effluent limits identified in the Draft Permit. The semiannual Priority Pollutants monitoring is being required to assure that toxic pollutants, other than those with effluent limits, are not being discharged. The sampling is similar to the semiannual monitoring required under the RGP.

CSXT described the 5 ug/l effluent limit for benzene as conservative. EPA is using the 5 ug/l as a technology based level. The GAC system should be able to meet the 5 ug/l level for benzene. The difference between the benzene limit for Outfall 001A and Outfall 002A is that the groundwater treatment system is technology based at 5 ug/l (ability for the GAC to treat) and the oil/water separator is water quality based at 51 ug/l (the water quality based level for Class B waters). Similarly, the 30 mg/l for TSS is technology based and consistent with RGP. Therefore, the effluent limits proposed in the Draft Permit shall remain the same for the final Permit.

Comment 10: CSXT (1) requested that EPA eliminate the following language from the permit: "The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts." CSXT believes that the statement is too broad and cannot be easily proven.

Response 10: This is standard language used by EPA for NPDES permits issued to facilities located in Massachusetts. The statement is consistent with one of the

Congressional goals set out in the CWA. "It is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited" according to the Federal Water Pollution Control Act § 101(a)(3). Additionally, the

Massachusetts Surface Water Standards regulations state "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife" according to 314 CMR § 4.05(5)(e). Therefore, the statement shall remain in the final Permit.

Comment 11: CSXT (1) requested that maintenance of the booms at the discharges from the Charles River Chamber and the Salt Creek Chamber be eliminated from the Draft Permit.

Response 11: CSXT took over the operation of the facility in January 2000. CSXT became responsible for the operational requirements of the previous owner, Consolidated Rail Corporation (Conrail). As such, CSXT shall be required to maintain the booms at the Outfalls 001 and 002, as defined in the final Permit. Conrail had a criminal action brought against it for failure to reapply for a permit at the Beacon Park Rail Yard and for certain other violations of the Clean Water Act. Related to the violations was the requirement to maintain a pump and treat system, the GWRT system for contaminated groundwater, to treat the runoff from the fueling pads and to maintain the discharges to the Charles River coming from the property. Additionally, the original permit issued in 1975 to Penn Central Transportation Company and the second permit issued to Consolidated Rail Corporation in 1987, required them to maintain oil absorption booms by the discharges to the Charles River. To date it has not been established with any certainty that the oil and grease and related contaminants being released is from any other source except CSXT. Therefore, CSXT shall continue to maintain the booms and perform other maintenance required by the "Findings of Violation and Order for Compliance," Docket No. 96-15, dated June 6, 1996, the previous permits, and the final Permit.

Comment 12: CSXT (1) requested that EPA allow them to submit the Discharge Monitoring Reports (DMRs) on a quarterly basis versus a monthly basis. CSXT stated that DMRs would be submitted quarterly for the monthly monitoring requirement.

Response 12: CSXT is being required to submit DMRs on a **monthly** basis, not on a quarterly basis. Since the last permit was issued in September of 1987, EPA has updated the PCS database for inputting DMR information. It is common for permittees to submit DMRs on a monthly basis for the sampling performed in the previous month. CSXT currently submits monthly DMRs for the sampling events that occurred during the previous month. Therefore, CSXT shall continue to report the sampling results on a monthly basis for most parameters.

Comment 13: Two commenters (3,4) were concerned that the flow of the water at the Charles River Outfall 001, periodically flows backwards into the pipe towards the Salt Creek Chamber.

Response 13: The observed flow of Charles River water into the storm drain is not believed to be associated with CSXT activities. CSXT does operate a groundwater pump and treat facility with extraction wells approximately 200 yards up gradient from the storm drain. It is believed that this distance is too great to result in groundwater withdrawal sufficient to cause the observed backwards flow from the Charles River at

Outfall 001. EPA has been actively involved in sorting out various problems with storm drains in the lower Charles, and will continue to work on the issue of this reverse flow at the Salt Creek as one of those issues. To the extent that CSXT appears to be contributing in any way to the problem, they will be asked to assist in resolving it.

Comment 14: Two commenters (3,4) asked that Harvard University be listed on the final Permit because they recently acquired the property from the Massachusetts Transit Authority. Additionally, a commenter (4) requested that Harvard University be added to the final Permit so they become more cooperative in releasing drawings showing the storm water drainage systems throughout the area that CSXT operates.

Response 14: The regulations promulgated under the Clean Water Act state that any person who discharges or proposes to discharge pollutants must submit a complete application to the Director according to 40 C.F.R. § 122.21(a). The regulation further requires that when "a facility is owned by one person but is operated by another person, it is the operator's responsibility to obtain a permit," according to 40 C.F.R. 122.21(b).

However, EPA has the discretion to also list the owner along with the operator of a facility on a NPDES Permit. In this case, a Harvard University subsidiary, Harvard University Beacon Yards, LLC, purchased the underlying lands from the Massachusetts Turnpike Authority on May 29, 2003. However, CSX holds an exclusive and perpetual easement over the property's use for railroad and related purposes. A copy of the original deed for the easement is included in the Administrative Record.

Additionally, there is no indication that Harvard University has had anything to do with the current or past activities at the site that cause pollutants to be discharged to waters of the United States. Therefore, EPA has chosen not to include Harvard University in this final Permit. EPA can always require Harvard University as the owner of this facility to submit an application for these discharges if it interferes, causes a violation of any condition under this final Permit, or for other reasons in accordance with the Clean Water Act § 402(b)(1)(C)(i). Finally, EPA can obtain drawings from Harvard regarding storm water drainage at the Beacon Park Yard without making them a Permittee under the authority of the Clean Water Act § 308(a).

Comment 15: One commenter (2) expressed a concern that EPA is not meeting the anti-backsliding requirement when reissuing a NPDES permit. The concern is that an increase in the maximum daily flow rate will cause an increase in the pollutant loading to the Charles River.

Response 15: EPA concludes that the final Permit meets the anti-backsliding requirement or alternatively, meets an exception to the anti-backsliding requirement. When a permit is renewed or reissued, effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit unless an exception applies according to 40 C.F.R. § 122.44 (l)(1).

At both Outfalls, the effluent limits are as or more stringent than the previous permit requirements based on concentration. In fact, EPA increased the number of pollutants with effluent limits (examples: benzene at Outfall 001A, and TSS and MTBE at Outfall 002A) and requires more monitoring for pollutants (Priority Pollutants at both outfalls).

In this case the permit writer depended on the water quality standards established for the waterway or has used a more stringent technology based limit to develop the effluent limits. For example, the water quality standard for a Class B Waterway in

Massachusetts is 51 ug/l for

benzene, while a more stringent 5 ug/l of benzene effluent limit is being used for the GWRT system. The technology for the GAC system is capable of meeting the more stringent effluent limit.

The total suspended solids limit for a Class B waters in Massachusetts is described in the regulations as "the waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom." For Outfall 001A, the Permit Writer used his best professional judgement based on the effluent guideline (EG) for Steam Electric Power Point Source Category 40 CFR Part 423. The effluent limit of 100 mg/l of TSS is technology based on an O/W separator's ability to treat TSS. See Fact Sheet, Section V.B.1.b and V.B.4 and 5. The EG level of 100 mg/l for TSS was also established to minimize an adverse impact on the environment. See the New Source Performance Standard section (40 C.F.R. § 423.15). Additionally, the final Permit limits the discharge of TSS at 30 mg/l for Outfall 002A. This level was established based on the GAC system's ability to treat for TSS.

The original permit (1975) did not restrict the flow rate to the Charles River and the second permit only restricted the maximum daily flow rate at Outfall 001A at 144,000 gallons per day based on the pump capacity. The Exclusion Letter (6/23/1994) limited the maximum daily flow rate at Outfall 002A based on the pump capacity. Outfall 001A is restricted to 130,000 gallons per day which is more stringent than the previous flow rate of 144,000 gallons per day. The restricted flow rate for Outfall 002A was related to pump capacity and not pollutant loading concerns because the effluent limits were set at or below the water quality standard for the receiving waterway.

Additionally, to assure that groundwater contamination does not reach the river, more water was needed to be captured and treated at Outfall 002A. Therefore, this circumstance meets the exception listed in 40 C.F.R. §122.44(l)(2)(i)(A), which states: "Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. Furthermore, EPA is requiring more pollutant effluent limits and more monitoring to assure the discharge is not negatively impacting the water quality of the receiving water.

Therefore, EPA believes it meets the anti-backsliding requirement or alternatively, meets an exception to the anti-backsliding requirement.

Comment 16: One commenter (2) was concerned that CSXT was not meeting the effluent limitation for total petroleum hydrocarbons in 2004.

Response 16: The values listed in the comments submitted to EPA were for the influent to the treatment system and not the effluent. CSXT has reported less than 1 mg/l (the detection limit) for total petroleum hydrocarbons (TPH) for all the months currently reported in the PCS database for 2004 at Outfall 002A.

Comment 17: One commenter (2) was concerned that monthly sampling at Outfall 001A might miss a concentrated amount of oil and grease (O&G) from the Car Shop, which only discharges twice a week. Also, the flow diagram (Figure 2 of the Fact Sheet) does not show where the discharge from the car shop enters the storm water system.

The commenter also inquired whether other contaminants are added to the waste water stream during the steam cleaning. Finally, the commenter wanted to know what level could an O/W separator treat to for O&G.

Response 17: First, there are no known additional contaminants (solvents cleaners, degreasers) added during the steam cleaning of the floors of the Car Shop according to CSXT. Metal filings may be added to the system in small quantities, but Priority Pollutant testing includes analyzing for toxic metal pollutants. The process waste water from the steam cleaning of the floors at the Car Shop flows into and combines with the facilities storm water drainage system at the Diesel Shop Area, Yard Drainage near the same point that is marked as "A" on the Figure 2 of the Fact Sheet. Next, the mixture of storm water drainage and the process waste water from the Car Shop flows toward the two 18,000 gallon retention basins. The mixture is then pumped into the retention basins from the low point of the storm water system.

During dry weather a more concentrated amount of process waste water from the Car Shop could appear at the retention basins due to the lack of storm water. However, the retention basins are large (a total of 36,000 gallons) compared to the flow from the Car Shop (a estimated maximum of 500 gallons, twice a week). The dilution factor is 72 to 1 (the volume of the retention basins and the volume of water from a steam cleaning event). The overall impact of the flow from the Car Shop would be minimal due to the dilution effect of the storm water and the retention basins, which would greatly reduce the concentration of O&G before treatment at the last O/W separator.

Historically, the O&G effluent limit of 15 mg/l has not been exceeded in 2002, 2003, 2004 and at least the first two months of 2005 (other more recent data is currently not readily available). This data shows that steam cleaning has not had a substantial effect on the O&G concentration. In fact, during that period the highest level of O&G was 5.1 mg/l. Therefore, the system should be able to operate below 15 mg/l at low flows and at the lower maximum daily flow rate of 130,000 gallons per day required in the final Permit being issued (versus 144,000 in the previous permit).

As far as missing any concentrated amount of O&G by the sampling frequency proposed in the Draft Permit, it is unlikely. The Fact Sheet states that Outfall 001A shall be monitored weekly, as the last permit required. However, due to a transcribing error, the Draft Permit only required a monthly sampling. CSXT is required to continue the weekly monitoring for O&G based on the reasons set out in the Fact Sheet. This sampling frequency should detect a concentrated amount of O&G. Furthermore, if CSXT purposefully avoids sampling due to a suspicion of a concentrated amount of O&G in the effluent, it could be subject to civil or criminal actions. Based on this information, EPA does not believe that monitoring of the Outfall 001A needs to occur during dry periods.

Comment 18: One commenter (2) points out that EPA has not proposed an effluent limit for O&G at Outfall 002A, although the first paragraph in Section V.F "Effluent Limitations - 002A," in the Fact Sheet states that O&G will have a limitation.

Response 18: EPA did not set effluent limits for O&G at Outfall 002A. Previously, CSXT was not required to monitor for O&G in the effluent according to the Exclusion

Letter dated June 23, 1994. The mentioning of O&G monitoring in the Fact Sheet was a transcribing error, as well as forgetting to list TPH, naphthalene, and MTBE as having effluent limits in the same sentence. Since the Fact Sheet is a final document, this Response To Comments acts to correct the error. These errors in the Fact Sheet do not change the final Permit.

O&G testing is deemed not necessary because CSXT shall be monitoring for TPH. Oil and grease analyses include other non-petroleum fats and greases in the result, which is not as relevant to the groundwater contamination being remediated. The total petroleum hydrocarbon test analyzes for petroleum compounds and then sums the concentration of compounds detected. O&G does not sample for specific compounds. Therefore, CSXT shall continue to analyze the effluent for TPH in lieu of O&G at Outfall 002A.

Comment 19: A commenter (2) asked that Whole Effluent Toxicity (WET) testing be performed at Outfalls 001A and 002A.

Response 19: Outfalls 001A and 002A combine in the Salt Creek Chamber and Charles River chambers, respectively. The discharges mix with storm water being drained from neighborhoods in the City of Boston, Allston area; the Massachusetts Turnpike Authority; and other abutting companies of CSX Corporation (the parent company of CSXT). This mixture then discharges into the Charles River. The discharges to the Charles River has signs of urban wastes including possible human waste.

The objective of WET testing is to try to predict the toxic effect on aquatic life from exposure to an effluent in a waterway. WET sampling from CSXT's discharges would only represent a small portion of the total discharge to the Charles River and would not be measuring the full effect on aquatic life from the effluent reaching the Charles River. Therefore, EPA has chosen to monitor for Priority Pollutants at Outfall 001A and 002A to observe whether the discharges from CSXT have toxic pollutants at levels that might pose a risk to aquatic life.

Additionally, EPA originally proposed that certain industrial sector facilities should perform WET sampling at their storm water discharges, when EPA was developing the NPDES Storm Water Multi-Sector General Permit for Industrial Activities. See 57 FR 41292 (Sept. 9, 1992). However, EPA decided to allow these facilities to monitor for toxic chemicals in lieu of WET sampling. In this case, EPA is requiring CSXT to monitor for Priority Pollutants instead of having CSXT perform WET sampling. EPA believes that the semiannual sampling for Priority Pollutants at 001A and 002A by CSXT will effectively screen the effluent for possible toxic effects on aquatic life.

Comment 20: One commenter (2) asked what was the basis for the benzene, BETX, MTBE and Naphthalene effluent limits for Outfall 002A. Furthermore, the commenter asked that PAHs be sampled monthly.

Response 20: The permit writer used best professional judgement in determining the effluent limits for petroleum-based pollutants. The main source used in determining the

effluent limits for these pollutants was the Fuel Oil Remediation, Part I, Section C.8 of the draft Region 1, Remediation General Permit (RGP). The Fact Sheet for the RGP establishes the effluent limits based on the following:

(a) benzene: Benzene has a commonly used technology-based effluent limit of 5.0 ug/l, which is also the current Maximum Contaminant Level (MCL) for benzene in drinking water. The National Recommended Water Quality Criteria for benzene is 51.0 ug/l based on consumption of organisms (example: fish) for a Class B Water.

(b) BTEX: The BTEX effluent limit of 100 ug/L is based on the typical removal efficiency of 99.5% or better for BTEX using a commercially available air stripper unit.

(c) MTBE: In the majority of discharges, permittees have been able to meet the effluent limit of 70 ug/L using air stripping and/or carbon adsorption.

(d) naphthalene: The effluent limit is based on EPA's recommended level for a lifetime exposure via drinking water at 100 ug/L.

EPA has determined that the granulated activated carbon system used to treat the groundwater should be able to meet the effluent limit established in the final Permit, since the RGP effluent limits are based on the use of similar technologies.

Many of the compounds analyzed using the PAH testing protocol are also listed as NPDES Priority Pollutants (PP). However, the PP list includes not only PAH toxic compounds, but it includes others. The other category of pollutants include toxic metals, toxic volatile organic compounds and other toxic compounds. EPA chose a semi-annual sampling frequency for PP to assure toxic chemicals are not being discharged above safe levels. Additionally, the information will be useful for the next permit. EPA also reserves its right to amend a permit if any pollutant is detected at a level associated with a health risk with the established uses of the waterway.

Comment 21: One commenter (2) was concerned that the PCS database shows that some Discharge Monitoring Reports (DMRs) were not submitted.

Response 21: Although this is not relevant to the Fact Sheet or the Draft Permit, EPA does have a process to review the PCS database to discover which permittees did not submit DMRs. In Region 1, the Office of Environmental Stewardship (OES) periodically prints a report of all permittees that did not submit the DMRs or exceeded their effluent limitations. EPA or the Massachusetts Department of Environmental Protection then decides which facilities to contact, inspect and/or begin an enforcement action. The commenter should be aware that EPA receives hundreds of DMRs each month and DMRs can sometimes get misplaced. Often a follow up discussion with the permittee clears up the missing data.

Comment 22: One commenter (2) asked why the TSS level at Outfall 001A was different than Outfall 002A.

Response 22: Outfall 001A has a maximum daily effluent limit of 100 mg/l and Outfall 002A has an effluent limit of 30 mg/l for TSS. The 100 mg/l limit is based on the technological ability for an O/W separator to remove TSS (see Section V.E.5 of the Fact Sheet). Additionally, the TSS concentration above 100 mg/l is a level that could potentially impair, or contribute to impairing, water quality or affect human health from ingestion of water or fish according to Benchmark Levels in the Storm Water Multi-Sector General Permit (65 Fed. Reg. 64766 (2000)). Therefore, the effluent limit of 100 mg/l for TSS is both technologically and water quality based.

The effluent limit of 30 mg/l for TSS at Outfall 002A is based on the RGP (Part I, Sections C.8, Fuel Oil Remediation). The Fact Sheet for the RGP states that the effluent limits are technologically based for the ability of a treatment system, like the granulated activated carbon (GAC) system, to treat below 30 mg/l for TSS. Additionally, the TSS effluent limit is particularly important to maintain the proper operation of a GAC system according to the RGP Fact Sheet (see page 40). Therefore, the effluent limit of 30 mg/l for TSS at Outfall 002A is a technologically based effluent limit for a GAC system and is an indicator that the GAC system is being properly maintained.

Comment 23: One commenter (3) noted that storm water was being monitored in a Draft Permit released for comments on August 19, 1999 at Outfall 001 and not in this final Permit. Additionally, the commenter requested that EPA consider sampling pollutants at Outfall 001A and Outfall 002A during storm events.

Response 23: First as a clarification, the storm water from the 1999 draft permit and the storm water and waste water mixture being treated at the last O/W separator before Outfall 001A are the same. The previous permit writer used "storm water" to describe the water treated because the majority of the water is from storm water. However, the last O/W separator treats diesel fuel and storm water from the Fuel Pad, non-treated process water from the intermittent cleaning of the floors at the Car Shop, and storm water from the storm water drainage system at the facility.

EPA is not requiring sampling during storm events because of the delay and dilution effect of the retention basins. The 36,000 gallon retention basins will dilute and delay most noticeable effects from a storm event. Furthermore, during a lengthy storm event, the storm drainage system could partially back up because the flow rate would be limited by the pumps that should operate at the restricted maximum daily flow rate of 130,000 gallons. Because monitoring during a storm event would not result in data truly reflective of the storm event, EPA is not requiring sampling during a storm event.

Similar to Outfall 001A, sampling during a storm event at Outfall 002A is unlikely to provide data truly reflective of the storm event. Depending on the soils near the groundwater pumps it would be hard to predict the delayed effect of the storm event. Additionally there is non-porous surfaces near the pumps (paved roads and parking areas) that would further complicate any good prediction of when to sample the GWRT system during a storm event. Therefore, EPA is not requiring the sampling for Outfall 002A during any specific time during a storm event.

Comment 24: One commenter (3) asked that the Storm Water Pollution Prevention Plan (SWPPP) require CSXT to include a map that delineates all known or suspected storm water pipes that run through its property and to note where the pipes connect. Additionally, the commenter asked that CSXT be required to inspect the oil/water separator, retention basins, catch basins, and "track mats" at least twice a year and to include an employee training program to address the operation and maintenance of the best management practices.

Response 24: EPA believes that a map delineating storm water pipes that run through the CSXT facility would help prevent the release of pollutants in case of a break or leak at a pipe. Therefore, EPA has added this requirement to the SWPPP section of the final Permit at Part II.B.5.a.i.

CSXT is already required to periodically inspect the O/W separator, retention basins, catch basins, and "track mats" on a periodic basis based on a schedule developed in the SWPPP (see Part II.B.5.a.iii "Preventative Maintenance" of the final Permit). Therefore, no change to the final Permit is required.

The SWPPP currently requires CSXT to develop an employee training program (see Part II.B.5.b.viii of the final Permit) with periodic dates for the training to occur. Therefore, EPA shall not add a specific requirement for the training to occur.