RESPONSE TO PUBLIC COMMENT

From January 10, 2003 to February 8, 2003, the United States Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MA DEP) solicited Public Comments on a draft NPDES permit, developed pursuant to a reapplication from the Massachusetts Turnpike Authority, for the wastewater discharge from the Central Arterty/Tunnel Project. After a review of the comments received, EPA has made a final decision to issue the permit authorizing the discharge. The following response to comment describes the changes and briefly describes and responds to the comments on the draft permit. A copy of the final permit may be obtained by writing or calling Betsy Davis, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CMA), Boston, Massachusetts 02114-2023; Telephone (617) 918-1576.

A) Comment submitted by Cindy Delpapa, Stream Ecologist, Riverways Programs on February 5, 2003.

Comment #1: One of the pollutants regulated by the draft CA/T NPDES permit is total suspended solids. The Harbor and its tributary streams have seen a measurable and dramatic increase in the diversity of biota living in the water as the harbor and river's water quality improves. Suspended solids can degrade water quality and result in impacts to aquatic and marine organisms-from abraded gills and reduced light levels. The TSS limits in this draft permit are 250 mg/l daily maximum and 100 mg/l annual average for all the outfall pipes with a monthly monitoring schedule.

The 250/100 is certainly different than the requirements placed on publicly owned wastewater treatment facilities mandated to meet secondary treatment limits of 30/45/50. The flows covered under this permit do not have a national standard leaving the limits to be defined based on correlation from existing standards and best professional judgment though there is the Multi-Sector General Permit for Industrial Activities setting 100 mg/l maximum concentration as the level unlikely to produce water quality concerns. Recently released draft NPDES permits such as Holden Trap Rock, discharging mine dewatering effluent and storm water flows, has a TSS monthly average of only 20 mg/l and BFI Industries of Tyngsborough has a maximum daily TSS of 60 mg/I for its treated stormwater. While neither facility is exactly comparable to the CA/T Project and the CA/T is not an industrial activity in the strict definition of the word, it is interesting to note how markedly different the TSS requirements are for the different projects and it could be argued that the Holden Trap Rock facility undertakes activities similar to those associated with the CA/T. A monthly monitoring schedule and one that avoids wet weather may be inadequate to completely understand the impacts the multiple discharges are having to the water quality. How were the TSS limits arrived at to ensure the level of TSS would not impact water quality for each of the four different receiving waters? Why wasn't the national "default" of 100 mg/l assigned to the CA/T discharges as is the case with the Algonquin Gas Transmission Company's draft permit to discharge non-industrial, neutralized ballast water into Boston Harbor and the Fore River estuary?

Response: NPDES Permit controls for a construction site are very different than for a conventional point source discharge, such as a wastewater treatment plant or industrial facilities. At a construction site the nature and extent of discharges are directly affected by weather conditions, soil characteristics, the specific type of construction activity occurring at the time, etc., all of which can vary significantly from week-to-week and sometimes day-to-day. The CA/T Project is a particularly difficult project to manage due to the linear nature of the construction, confined work space, extensive subsurface excavation and soil management, large volumes of concrete and cementitious materials being used, miles of slurry walls,

soil mixing and freezing procedures, etc. The depth of the excavations significantly complicates the NPDES issues in that the majority of the soils being excavated are fine particulate soils (silts and clays) which due to their small particle size are difficult to remove from the dewatering discharges.

In order to address these issues, staff from the CA/T Project, EPA and DEP worked cooperatively to develop a suite of mandatory BMP and oversight/reporting procedures which must be implemented by each contractor and subcontractor. Each contractor is required to have its environmental sub prepare a site-specific Erosion and Sedimentation Control Plan (E&SCP) which is reviewed and approved by the CA/T Project and DEP (copies also are provided to the local conservation commission who incorporate the plan into their Orders of Conditions, making them mandatory actions under the Mass. Wetlands Protection Act).

In the 1996 permit renewal application, the Massachusetts Highway Department requested an increase in the TSS limits to a single maximum daily limit of 500 mg/l stating that it was a more achieveable limit for construction activities based on information presented by the Watershed Protection Techniques (February 1997).

While EPA and MA DEP acknowledged the difficulty in managing such a large project both Agencies agreed that 500 mg/l was too high to maintain water quality. EPA and MA DEP proposed a maximum daily limit of 250 mg/l and an annual average of 100 mg/l as well as expanding the scope of the BMPs to address TSS exceedances. The current 100 mg/L TSS annual average limit is a very strict criteria for major construction projects. The CA/T Project strongly opposed this limit but EPA and DEP (in cooperation with the Boston and Cambridge Conservation Commissions) felt that the inclusion of such a limit would be attainable with treatment while maintaining water quality, and therefore decided to again include this limit into this proposed amendment.

The BMPs includes language that it is the responsibility of each Contractor to complete and submit the detailed site specific Stormwater/Dewatering Pollution Prevention Plan, S/DPP, (comprised of an Erosion and Sedimentation Control Plan and Spill Prevention Control and Countermeasure Plan) to the Resident Engineer for review and approval by the CA/T NPDES Permit Coordinator at least 30 days prior to construction. In addition, the S/DPP are reviewed and approved by MA DEP and provided to the Conservation Commission having jurisdiction of the specific contract.

The S/DPP Plan specifies, to the extent practicable, the exact location of all mitigative and control structures including: locations of outfalls, sumps, siltation fences, hay bales and other proposed sedimentation control devices, details for the sedimentation tank, its location and connections to existing or proposed drainage structures, the route of the discharge to the outfall through the BWSC, EDIC, Massport, MHD or other drainage lines, and the schedule and program for the maintenance and monitoring of all components of the dewatering system, including control devices and any drainage lines used to convey dewatering discharges.

Although both the TSS limits in these permits you mention and in the Multi-Sector General Permit for Industrial Activities are less than the limits in the CA/T draft permit, the characteristics of the wastewater are also different. For instance the wastewater from the Algonquin Gas Transmission Company is generated from hydrostatic test on the pipes, unlike the the millions of tons of concrete and cementitious materials used on the CA/T project. We believe that the scope of the CA/T project, the immense volume of excavated soil, most of which include significant percentages of fine silt and clay particulates during

construction, and the ever changing discharge locations are all factors that had to be considered in setting the TSS limits.

Comment #2: It is interesting to consider the Charles River, one of the receiving water for six currently active CA/T discharges, when reviewing the CA/T permit. The river is listed as impaired due to a number of causes including turbidity, organic enrichment/low DO, and oil and grease. A daily TSS maximum of 250 mg/l seems to be a generous limit given the identified problems in this receiving water. Issues like turbidity are also not addressed in the permit though if seems possible multiple discharges of high TSS concentration effluent flows could exacerbate local turbidity problems in the river. The Millers River is a small water way and does not have the water volume or flushing of Boston Harbor making it more susceptible to impact by a daily TSS concentration of 250 mg/l for each of a number of discharge points.

Response: See comment #1 for TSS discussion. Language on turbidity for Class B receiving waters from the Massachusetts Water Quality Standards has been added to the final permit. See Page 3, Part I.A.1. c of the final permit.

The most recent NPDES permit application required quantitative data for oil and grease be submitted for each outfall. Indeed the permittee stated that oil and grease is present at construction sites however results submitted for 111 analyses of oil and grease, indicated the long term average to be 2.28 mg/l. Based on this recent data, EPA and MA DEP believe oil and grease at such low levels are being addressed by the BMP's .

Comment #3: The Fact Sheet did not contain specific data from past Discharge Monitoring Reports though it did note, during the first three quarters of 2002, discharges from CA/T were not able to meet TSS requirements. The Fact Sheet was not specific about the percentage of discharges unable to meet concentrations limits or how much the concentration exceeded the limit for a given pipe. It was unclear if this summary of compliance was based on all four quarters of 2002 and the discharges met TSS limits during the final quarter or the final quarter was not included in the analysis due to timing limitations. On the EPA's Envirofacts web data base, the page for CA/T had only the first few months of 1998 listed for compliance data. The query for CA/T data did not produce recent DMR data such as that cited in the Fact Sheet. The only current data on the web pages, (through 2002) was information on inspections making it difficult to assess compliance.

With the caveat concerning the limited and dated DMR information available from the web based data base, it was obvious the permittee experience problems with the discharges meeting limits for several parameters including TSS. For example Outfall D05 had a TSS concentration average in excess of 84,000 mg/l for the January sample and a range of 21,305 to 84,800 mg/l in the first four months of 1998. This is several orders of magnitude above permit requirements and it seems the CA/T Project was unable to rectify problems with the discharge since all the subsequent months were two orders of magnitude above the permit concentration limit. Flow data was not listed for the month with the TSS concentration of 84,800 mg/l. Flow was available for the next month and was listed as 100 gpm. A quick calculation using the flow rate and the TSS concentration for that month, 42,440 mg/l, results in a load of 2,125 pounds per hour from this single outfall of the CA/T Project.

This outfall was also not an aberration; other outfalls with information on the first four months of 1998,

(available through the web database) had TSS concentrations with numeric violations of the permit limit. This is coupled with the Fact Sheet stating the permittee was still out of compliance four years later in 2002. The Fact Sheet narratives explains, "these facilities have operated satisfactorily, or the permittee has initiated corrective actions as necessary" but the data available on the discharges seems to indicate this is not the case. High TSS concentrations were frequent in 1998 and CA/T was still struggling, and failing, to meet permit limits in 2002. If an outfall is above permit limits and corrective action is taken, does the permittee undertake subsequent testing, before the next monthly required monitoring, to determine if the corrective action was successful in bringing the discharge into compliance. Is a discharge curtailed when it is found to be out of compliance until corrective actions are taken?

Response: The compliance summary in the fact sheet is based on TSS data from the first three quarters in 2002. That was the most current data available when the draft permit was written. The DMR data submitted by the permittee for the last quarter in FY 2002 showed no violations.

The data on Envirofacts is not reflective of the discharges associated with the current on-site construction. The total suspended solids discharged have consistently decreased over the last several years. A total of 28 million tons of soil had to be excavated at the beginning of the project and the TSS exceedances were considerably more frequent than what is now occurring. As the project winds down, with less than 2 million tons to be excavated, EPA and MA DEP believe the limits in the draft permit along with the continued implementation of BMPs can be consistently met by the permittee.

Contractor accountabilty has proved to be one of the best method of addressing permit exceedances. The CA/T Project prepares and submits weekly environmental inspection/observation reports which provides detailed information relative to on-going contracts, outfall inspections, and compliance actions taken. If a contractor is out of compliance CA/T issues fines to individual contractors and if the problem is not fixed <u>within a week</u>, the contractor's entire weeks payment, which can be substantial, is withheld until the problem is corrected.

<u>Comment #4:</u> From the concentrations seen in the effluent, it seems reasonable to assume there is a frequent build up of sedimentation in the tanks used for treatment. It is important to maintain the tanks, especially if wet weather is likely to occur, to prevent diminished tank's capacity due to a build up of sediments. Since some storm water flows are directed to the sediment tanks for treatment, the exclusion of wet weather testing does not seem to be in the best interest of protecting the receiving waters. A large pulse of storm water commingled with discharges from the site flowing through the sedimentation tank could result in resuspension of sediments and organic matter and/or a lowered removal rate. Even if the concentration limit is met, the increase in flows due to the storm water influx would result in a greater load discharged into the receiving waters. The sediment disposal is also of interest. Are personnel trained to prevent inadvertent spills or releases to waterways or the storm sewer system during clean outs? Are the sediments removed from the wastewater treated as 'street sweepings' or in some other manner? Are the sediments tested for metals and other pollutants? Since the effluent has exhibited elevated concentrations of metals and total petroleum hydrocarbons, the sediments are suspect.

These problems with meeting TSS concentration limits and the distinct differences in the size and character of the receiving waters, the impaired status of the receiving waters, the variability of the flows, the absence of national guidance on this type of project, and the variability in TSS limits found in non--POTW permits presents a strong argument to institute a total maximum daily load for each receiving water based on the state's water quality standards and to have more frequent monitoring during dry and

wet weather. The daily maximum concentration should also be reconsidered to reflect the recommendation of the National Multi-Sector General Permit.

Response: All CA/T Field Engineers (FEs) receive training on requirements and types of activities that require additional control. The FEs, assisted by the CA/T NPDES compliance staff, are the point-of-contact with construction staff, and raise any concerns with the Contractor so that they address issues with their personnel. Special attention has been brought to pH control, use of coagulants, slurry spill response, jet grouting and chemical grout control and response, and proper maintenance of sedimentation systems.

The CA/T project managers have raised concern over education with DEP and in Conservation Commission Hearings, that training is not always perfect, since new union workers come from other sites that may not have NPDES permit conditions, oversight and training. They now have most work in their respective jurisdictions in the Boston Area mirroring the permit BMPs in Conservation Commission Orders of Conditions. Worker awareness is much improved, and Contractors identify a point-of-contact (in the field) who helps address concerns quickly.

Storm water that discharges to a point source is all treated prior to discharge. Sediments are typically removed using either an excavator or a vacuum truck and hauled (sometimes after on-site dewatering) to the Materials Processing Facility, commonly referred to as the Subaru Pier Site, and placed with other excavate material. The material is then tested in accordance with DEP's requirements prior to reuse or disposal.

It is important to also note that along with the NPDES Permit is the direct oversight by DEP of the project relative to spills/releases of Oil and Hazardous Materials (OHM) through its c.21E State Superfund Program and the Massachusetts Contingency Plan (MCP). DEP designated the entire CA/T alignment a 21E-regulated Site due to the “potential for release of OHM” from site excavations, specific types of remedial actions (e.g., asbestos and lead paint abatement), and spills or releases of OHM by contractors (e.g., fuel spills). This regulatory requirement requires the contractor to retain the services of a License Site Professional and work with the CA/T’s Right-of-Way Assessment and Remediation Services (ROWARS) group and DEP staff to manage all activities related to OHM.

This has been an extremely successful program and has ensured that specific aspects of the alignment (e.g., removal and cleanup of above and below grade petroleum storage facilities), areas of the site which have been designated “Clearance Areas” based on soil/groundwater sampling, and contractor spills/releases (e.g., rupture of vehicle fuel tank or hydraulic hoses) are fully assessed and remediated. This often includes the specific treatment of site dewatering discharges in areas of OHM prior to reinjection back on-site or discharge to a NPDES-Permitted outfall (treatment typically including a Fractionation Tank and a Sand/Carbon Filter).

Literally tens of millions of dollars have been expended by MTA, CA/T Contractors, and DEP during the life of this project to properly manage OHM, much of it related either directly or indirectly to discharges to the waters of the Commonwealth.

To our knowledge, CA/T discharges have not resulted in any specific adverse significant impacts such as fish kills, closures of shellfish resource areas, or impacts to public bathing areas.

<u>Comment #5:</u> More frequent monitoring is also warranted for pH. pH monitoring is required once per

quarter but given the ease of monitoring pH and the problems the permittee has had meeting the pH upper limit, a daily monitoring schedule would provide the permittee and its contractors with the information needed to correct for pH excursions in a timely manner. The current sampling schedule could result in months of highly basic flows entering the receiving water. The information from the EPA web data base suggests the flows from the CA/T Project work sites can be highly basic. For example: outfall D05's one pH data point listed in the Envirofacts query was 11.95 s.u. This is well in excess of Class B and SB standards, especially given the logarithmic pH scale. The Fact Sheet also notes violations of the upper pH limit during 2002 at the CA/T outfalls.

This information highlights the pH range in the draft permit which has the upper pH limit at 9.0 s.u. The state's water quality standard for pH for Class B upper limit is 8.3 and Class SB is slightly higher at 8.5 s.u. An upper limit of 9.0 s.u. may not prove problematic in a well flushed salt water environment such as Boston Harbor but the same may not be true of a small, highly impacted stream such as the Millers. Reducing the upper limit of pH to reflect water quality standards for the Charles and Millers Rivers and an increase in monitoring of the discharges, for as long as levels are found in excess of the permit limits, would help the permittee address the pH problems evident from past data and prevent any more undue stress on the receiving waters.

Response: The upper pH limit in original 1991 permit was modified in the 1997 permit to 9.0 S.U., and this limit was carried over from the existing permit. Elevated pH is unavoidable in construction operations involving concrete curing, installation of tie-backs and jet grouting. In the earlier years of the project the need for pH adjustment was more common because dredged material was lime stabilized on-site prior to being shipped off-site for reuse or disposal at approved facilities. For the remainder of the project, very little additional dredging will be necessary.

EPA and MA DEP believed the increase in the upper pH limit was a reasonable change in the limit due to the scope of the project, and also the high buffering capacity of the receiving waters. Discharges anticipated to exceed the pH limit are treated with a Carbonix treatment system for pH adjustment or $CO_2$ injection units to remain in compliance with the pH limits.

Since cement curing increases pH levels the BMP plan also includes specific steps that contractors should take to minimize contamination due to cementaceous material such as

(1). Minimizing the use of water as much as possible while properly completing the task;

(2). Capture the runoff and reuse it if possible;

(3). Trucks are washed in designated areas. The truck washings are contained in a pit (or basin) with sides (or a berm) of sufficient height and width to prevent seepage and overflow. Chutes on the trucks must extend into the pit/basin and any material missing the pit/basin must be placed in the basin to prevent tracking;

(4). Grout is recaptured when and where possible and segregated from any drainage pathway that receives dewatering or runoff flows. Efforts are made to minimize water contacting un-captured grout (e.g., reduce volume of rinse water, repair leaks, etc.). Water that contacts grout-like material is pre-treated before being discharged to properly sized sedimentation tanks. One method used for pre-treatment is to direct runoff through a series of crushed stone check dams in a long swale to a sump-

pump set in a slotted pipe surrounded by crushed stone that also pre-filters water before discharging to the sedimentation tank.

One method used for pre-treatment is to direct runoff through a series of crushed stone dams in a long swale to a sump-pump set in a slotted pipe surrounded by crushed stone that pre-filters water before discharging to sedimentation tanks.

(5). Efforts are taken to preclude excess grout from entering the drainage system. This is accomplished by, covering catch basins; collecting grout on tarps and discarding material as work progresses; shielding the drainage path from discarded grout. Grout entering the drainage path should be cleared daily and excess grout swept from work areas to minimize pH and turbidity.

Comment #6: The Charles River is an impaired water with metals listed as one of the causative factors. The information available on the web based data base has limited metals information but what is provided is of concern. Several of the metals monitored were found in high concentrations in the effluent. Going back to outfall D05 as an example, the aluminum concentration was 566,000 ug/l for the one sampling data point available in the database. For perspective on the magnitude of this concentration, the GE Pittsfield permit has an allowable concentration of 87 ug/l average monthly and 750 ug/l daily maximum for several of its discharges based on National Water Quality criteria. Aluminum is considered significantly hazardous to human and aquatic health. Several other metals tested in this effluent flow had elevated concentrations such as chromium with 1,290 ug/l, 6.280 ug/l lead and 2,690 ug/l of copper- a metal known to be toxic to marine organisms even in minute amounts. Given the metals data available, it seems there are valid reasons to be concerned about the chronic and acute toxicity of the effluent related to the burden of metals being discharged by the multiple pipes coming from the CA/T Project. The CA/T permit should set concentration limits for the metals included in the permit based on National Recommended Water Quality Criteria. Some consideration should also be given to whole effluent toxicity testing to determine if the combined discharges of the outfalls to a single receiving water are producing acute or chronic toxicity.

Response: The highest concentrations of aluminum were related to wheel wash operations at the CA/T's excavate testing and stockpiling facility at Subaru Pier. Data analyses (presented in the renewal application in 1997) showed that there was a strong correlation between total metals, in particular Aluminum and Total Suspended Solids (TSS). The highest concentrations were reported at Subaru Pier where clay was being washed from tires and not settling adequately. Clay contains aluminum as a aluminum oxide, common to native soils.

These high concentrations of Aluminum were addressed by installing and operating a polymer-fed coagulant system that dramatically lowered TSS and consequently aluminum from the wheel wash discharges. The high concentrations that yield the previously reported values have not been seen since the permittee has instituted this management practice.

Comment #7: A question about the metals listed in the permit. In Part I.A.2.a.1 there is a reporting requirement for " ... any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:" (1) one hundred micrograms per liter....". Many of the metal concentrations, as listed in the Envirofacts data base, exceeded 100 ug/l. Also the concentrations of these metals are " not limited in the permit" as there is only a monitoring and reporting

requirement. Does this section of the permit apply to these exceedances and the permittee is required to notify the agencies in addition to reporting the results of the sampling on their DMR? If discharges from one or more outfalls are above "notification levels" as defined in the draft permit, is action typically taken by EPA if there are no stated concentration or loading limits in the permit?

Response: This particular section of the draft permit, Part I.A.2. addresses requirements for manufacturing, commerical, mining, or silvicultural facilities. The CA/T project does not fall under any of these categories, and the requirements in this section do not pertain to the CA/T discharges. Therefore, the language has been deleted from the final permit.

Comment #8: In Part 1, section B.I.d., the list of specific recommendations for best management practices is extensive. The list covers the topics pertinent to a sound BMP plan for most projects but the CA/T Project is not typical. A project with so large a scope and numerous contractors and sub contractors working might benefit from an additional piece of guidance to ensure good BMP practices are maintained at the various work sites of the CA/T. Adding a ninth requirement, that training and education for pertinent staff, contractors and sub contractors be provided, improves the efficacy of the list.

Response: A training and education requirement has been added to Part 1, section B.1.d of the permit. The BMP also outlines the education and training requirements for management, staff, and construction staff. See Part III. Management Structure for the Implementation of Best Management Plan.

The training sessions are contract specific, and there are on-site presentations for both existing and new contracts. BMPs that pertain to the specific work sites are discussed as well as reporting and response measures. The on-site training also includes how to prepare various monitoring reports such as weekly observation reports, environmental field reports, daily flow reports, and BMP inspection checklists, to increase the effectiveness of BMP implementation.

Comment #9: In Part 1, section B. 1.g. (1) (d) two other activity areas to note on a site map which would be of benefit are: refueling areas and materials storage, (if the material has the potential to become water borne and enter the drainage system).

Response: Part , section B.1.g. has been updated to include these two areas on the site map.

Comment #10: The Fact Sheet reported some problems with exceedances of total petroleum hydrocarbons in 2002. The 1998 first quarter data did not have information on TPH or Volatile Organic Compounds. This information makes one wonder if oil and grease may be a problem in the effluent. There is often oil sheens visible in the Charles and the harbor and its origins are probably numerous but it is possible some oil and grease is generated from the CA/T discharges from sites where multiple activities and any number of substances and materials are used in the construction and finishing processes for the bridges, ramps, roads and tunnels. A monitoring requirement would help determine if oil and grease are constituents of the effluent and allow the permittee to take corrective action if needed

Response: The BMP describes treatment technologies that are used to treat contaminants associated with construction operations which includes oil and grease. The contractors are responsible for providing, maintaining and replacing all treatment equipment and material used at the site. Siltation

fences, silt boom/curtains, surface stormwater controls such as sorbent booms and filter fabrics, and sedimentation tanks are used to minimize contaminants.

See response to question #2 on oil and grease in the effluent.

Comment #11: Milky, opaque flows from at least two CA/T work sites flowing into storm water sewers and lasting several days has been observed by Riverways staff in the past year. The flows appeared to be coming from the sites untreated. These chance observations of, at least, aesthetically compromised discharges, make one question the rigor of individual site best management practices. The less than stellar compliance record adds to concerns about impacts to receiving waters from CA/T activities. The infrequent monitoring required, the ephemeral nature of some of the flows, and the many different contractors and subcontractors involved, speak to making a permit that has the capacity to identify problematic flows in a timely fashion to correct problems. Discharges failing to meet limits or notification requirements should be suspended until measure can be instituted that correct the problem and meet the approval of the permitting agencies. If wet weather flows combine with site discharges and these flows are not covered by a general stormwater permit, more testing is warranted for wet weather. Several of these discharges share an outfall with CSOs. This means the receiving water is impacted be a combination of these two flows though neither the CSO permit nor the CA/T permit is written with this consideration as a factor in determining limits.

Response: All CSO outfalls are specifically included in the NPDES Permit for either/both the Massachusetts Water Resources Authority (MWRA), Boston Water and Sewer Commission (BWSC) or City of Cambridge. EPA and DEP are also in the process of reissuing or amending these NPDES Permits to add significant additional CSO requirements. The sampling procedures for the CSO discharges and the CA/T construction activities have been carefully considered and coordinated. The CA/T discharges are monitored before discharging to the outfall structure (whether it be a CSO or separate stormwater).

EPA and DEP disagree that the monitoring is “infrequent”. The CA/T permit includes more extensive monitoring, oversight, inspections, BMPs and treatment systems than any similar construction project ever permitted in Region I. It was also the first construction project in the Nation to receive an Individual Construction NPDES Permit.

The controls, remedial action, and BMPs for this project have been used as the basis for most other large construction projects in Metropolitan Boston and other parts of the Commonwealth.