CITY OF
CHULA VISTA

DEPARTMENT OF PUBLIC WORKS OPERATIONS

May 4, 2007
File # 0780-85-KY181

Construction General Permit – Stormwater
Deadline: 5/4/07 5pm

State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Attention: Song Her, Clerk of the Board

SUBJECT: COMMENTS ON THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PRELIMINARY DRAFT CONSTRUCTION PERMIT, TENTATIVE ORDER NO. 2007-XX-DWQ, DATED MARCH 2, 2007

The City of Chula Vista appreciates this opportunity to provide comments on Tentative Order No. 2007-XX-DWQ. City staff has carefully reviewed the Tentative Order, and has specific comments that are presented in Attachment A to this letter.

We trust that the State Board will give full consideration to the comments and recommendations in order to facilitate continued compliance, and to improve effectiveness of the Construction Permit program.

Should you have any questions or if you need further information, please call Khosro Aminpour, Senior Civil Engineer, at (619) 397-6111. Thank you.

KIRK AMMERMAN
PRINCIPAL CIVIL ENGINEER

Attachment

cc: Dave Byers, Director of Public Works Operations
Rick Hopkins, Assistant Director of Public Works Operations
Khosro Aminpour, Senior Civil Engineer

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ATTACHMENT A

CITY OF CHULA VISTA'S COMMENTS ON THE NATIONAL POLLUTANT DISCHARGE ELEIMINATION SYSTEM (NPDES) PRELIMINARY DRAFT GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES DATED MARCH 2, 2007

Notes: 1. Texts in *italic* are quotes from the Draft Construction Permit
2. Some topics are discussed in several sections of the Draft Construction Permit. Page and Section numbers referenced below are those in which related topics are discussed for the first time.

Page 3, Section I.9

> *"Construction activities can cause hydromodification, and its effects can occur both during the construction phase and after construction is complete..."*

Comment:
The Permit requires compliance with Hydromodification requirements during and after construction. This requirement is partly addressed by the construction of sedimentation basins, which also act as detention facilities. However, any other provisions during construction are impractical due to the dynamic nature of construction sites. Post-construction Hydromodification requirements are included in the recently adopted NPDES Municipal Permits and duplication of the requirements is unwarranted. It is recommended that Hydromodification requirements be eliminated from the General Construction Permit or not be applicable to areas under municipal permits.

Page 5, Section I.19

> *"Soils with more than 10% (by weight) of their particles smaller than 0.02 millimeters (mm) (i.e. finer than medium silt) do not settle easily using conventional measures for sediment control (i.e. sediment basins). Given their long settling time, disruption of such soils results in significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS) can prevent or reduce the release of fine particles from construction sites. Therefore, dischargers whose sites contain such soils must implement either an ATS or, alternatively, the source control measures specified in Section G to ensure that these fine particles are not released into receiving waters."*

Comment:
Active Treatment Systems (ATS) are required for sites with 10% or more soil particle sizes of 0.02mm or smaller. Considering that soil characteristics vary significantly with location and depth, this requirement is vague and impractical. It is recommended to leave the decision to install ATSs to the professional judgment of the developers, contractors, and inspectors.

Page 5, Section I.20

> *"In many parts of California, rain events can occur at anytime of the year. Therefore a Rain Event Action Plan (REAP) (Section XI) is necessary to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the "dry" season."*

Comment:
Since adequate erosion and sediment controls are required throughout the year, Rain Event Action Plans are redundant and they may lead to the perception by some developers and contractors that control measures are to be deployed only after the forecast of a storm event. It is recommended that the requirement for a Rain Event Action Plan be deleted.

Page 7, Section I.26

> *"This General Permit establishes requirements based upon the project's overall risk to cause pollution. The table below summarizes the differences between the risk categories."*

Comment:
The Permit needs to define "Receiving Waters", as referenced in Table 1, in terms of sampling and monitoring requirements as related to construction activities within construction sites.

Page 8, Section I.29

> *"Dischargers located in a watershed where a Total Maximum Daily Load (TMDL) has been adopted by the Regional Water Board or USEPA, may be required by a separate Regional Water Board action to implement additional Best Management Practices (BMPs), conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule, or obtain a Regional Water Board permit specific to the area rather than this General Permit."*

Comment:
More stringent requirements for construction sites located within TMDL drainage areas should be limited to areas discharging directly to those impaired Water Segments and not the whole watershed. As an example, there are several Water Segments or Hydrologic Units within the San Diego Bay, designated as impaired, for which TMDLs have been or are in the process of being developed. Only limited drainage areas discharge to those water segments. Therefore, the whole watershed should not be subjected to more stringent requirements only because they are in the same watershed as the impaired Water Segments. It is recommended that only areas draining to impaired Water Segments or Hydrologic Units be subjected to the more stringent requirements. This concept has precedence within the San Diego County Municipal Stormwater Permit (Order No. R9-2007-0001) where TMDL related provisions are required for only discharges into the specific hydrologic units that are impaired.

Page 11, Section IV.2

> *"Dischargers shall reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants."*

Comment:

Best Available Technology & Best Conventional Technology Standards

This Section of the Preliminary Draft Permit introduces two key concepts into the provisions of the Order. These concepts premise many of the concerns that the City of Chula Vista has identified in the review of the Preliminary Draft Permit.

Best Available Technology (BAT) and Best Conventional Technology (BCT) standards to "*reduce or prevent pollutants in storm water discharges and authorized non-stormwater discharges through the use of controls, structures, and management practices...*" have been established through the language found in this Section. Specifically, the BAT standard is prescribed for toxic and non-conventional pollutants and the BCT standard is prescribed for conventional pollutants.

Attachment A – Glossary of the Preliminary Draft Order defines BAT and BCT in the following manner:

Best Available Technology Economically Achievable (BAT) – As defined by the USEPA, technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT) – As defined by USEPA, technology-based standard for the discharge from existing industrial point sources of conventional pollutant including BOD, TSS, fecal coliform, pH, oil and grease. The BCT is established in light of a two-part "cost reasonableness" test which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The second test examines the cost-effectiveness of additional industrial treatment beyond BPT. EPA must find limits, which are reasonable under both tests before establishing them as BCT.

As defined above, and as prescribed in the Permit language, the application of BAT and BCT standards as a compliance measure within this Preliminary Draft Permit is inappropriate for construction activities on many levels. Most notably, these standards are industrial in nature, and the definitions above clearly assert their application within the realm of point source industrial discharges, and are, therefore, not applicable to construction related discharges. Further, the basis for both of these standards describe an *economically feasible* premise that has not been taken into consideration throughout

many of the provisions within the Permit that appear to be founded upon the BAT and BCT standards.

Page 11, Sections IV.3 and IV.4

> *IV.3 - "NEL for medium and high risk discharges: a. The pH of storm water and non-storm water discharges shall at all times be within the ranges of 5.8-9.0 pH units, 18 months after the adoption of this General Permit"*
> *IV.4 – "NELs for discharges from an ATS: a. Acute toxicity of ATS discharges shall have no significant difference, at the 95% confidence level, between the control discharge and 100 percent effluent (at t-test), applied as a monthly median of pass-fail tests b. , c. ,d. ."*

Numeric Effluent Limitations (NEL)
The second concept introduced in Section IV – Effluent Limitations of the Preliminary Draft Permit is that of Numeric Effluent Limitations (NEL) *for medium and high-risk discharges* AND for discharges from an *Advanced Treatment System (ATS).*

As drafted, the Preliminary Draft Permit has established an NEL effectively requiring that *pH of storm water and non-storm water discharges shall at all times be within the ranges of 5.8-9.0 pH Units, 18 months after the adoption of this General Permit.* In addition, NELs requirements for discharges from Advanced Treatment Systems (ATS) have been included in this draft.

The establishment of such stringent standards, and all associated NEL requirements, has not been substantiated within this draft, and is not consistent with the recommendations presented in the Blue Ribbon Panel report entitled ***"The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities,"*** dated June 19, 2006. Most notably, the requirements established in this draft are largely contrary to the considerable reservations and concerns described in the report including:

- **"Non-active erosion and sediment control BMPs, while effective when applied and adequately maintained, produce highly variable effluent quality, making settling [*sic*] Numeric Limits difficult, if not impossible."**

- **"The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond."**

Specifically in consideration of *pH* as a constituent under which to establish NELs, the draft permit has not clearly established the reasoning behind this determination. The natural variation of pH due to uncontrollable environmental factors must be examined prior to the establishment of an NEL for this constituent. The precedent that may be set under the establishment of an NEL for pH, and all of the associated requirements that it triggers, should be approached with regard to all factors that may impact the quality of discharge. Consistent with the document referenced above, considerable reservations and concerns should be addressed prior to the establishment of such a standard.

In addition to the infeasibility of the standards established through NELs, the toxicity standards for *discharges from an ATS* are overly rigorous in consideration of the dynamic nature of construction related discharges. The application of such toxicity testing requirements is impractical and again sets up a standard that is infeasible for compliance.

Ultimately, the interrelationship of BAT, BCT and NEL standards to construction activities has set up a regulatory environment for which compliance is wholly unachievable. As such, the compliance standards established within this Preliminary Draft should be revised with consideration to the unique and dynamic nature of construction related activities, associated discharges and constituents, and commensurate with the reservations, concerns, and conclusions of the State Water Board convened Blue Ribbon Panel that prepared the report entitled ***"The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities,"*** dated June 19, 2006.

Page 12, Section VI.3

> *"Storm water discharges and authorized non-storm water discharges shall not cause foam at discharge locations."*

Comment:
Some surface waters contain naturally dissolved organic compounds. Some are surfactants, which due to flow rate of the runoff, duration of the event, and location can cause foam to form and build up against an obstruction in a channel. The storm water runoff from an outfall or discharge point from a construction site most likely will co-mingle with other runoff from an already developed area. This requirement is too vague and impractical.

Page 12, Section VI.4

> *"Storm water discharges and authorized non-storm water discharges shall not cause deleterious physical impacts to directly connected receiving waters (for example, excessive channel bed and/or bank erosion)."*

Comment:
The establishment of a compliance standard to determine *deleterious physical impacts* is vague and ambiguous and may equate to unreasonable enforcement, and significant exposure to third party lawsuits. This compliance requirement is not feasible for construction areas. Further, the management of hydrologic conditions has been addressed through other provisions found within the permit; therefore, this additional compliance standard should be removed from the draft permit.

Page 15, Section VIII.A & Attachment F

> *"1. The Discharger shall determine a risk category for the project using the methodology in Attachment F, Sediment Transport Risk Worksheet, prior to construction activities commencing. The risk category shall be noted on the NOI form and/or SWPPP Checklist."*

Comment(s):
It is important to recognize that this Draft Permit has been developed around the determination of a *risk category (high, medium or low)* for each project through the application of a methodology described in Attachment F. Per the determination of *Sediment Transport Risk*, a discharger is subject to a wide array of provisions articulated throughout the draft permit.

As currently framed, it is important to evaluate the methodology that has been used to determine a project sediment transport risk. The City of Chula Vista is concerned that the methodology presented in Attachment F sets up a permit structure where the broad majority of projects statewide will be subject to more stringent requirements as prescribed to them through the results of this applied methodology. Application of requirements including those associated with numeric effluent limitations and action levels, as a result of a *high* sediment transport risk would result in the unintended widespread determination of High Sediment Risk for a majority projects throughout the State.

Page 16, Section IX.B

> *"Action Levels (Als) – Whenever effluent monitoring indicates that an AL in Table 2 is exceeded, the discharger shall immediately implement corrective actions if appropriate;...."*

Comment(s):
Action Levels (ALs)
Specific to the application of Action Levels for *turbidity*, the State Water Board convened Blue Ribbon Panel that prepared the report entitled ***"The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities,"*** dated June 19, 2006 has identified the following:

- **"An important consideration in setting Numeric Limits or Action Levels in that in many locations in California the natural background turbidity and/or TSS levels in stormwater runoff are quite high. This is particularly true in semi-arid or arid regions, which tend to have less vegetative cover"**

- **"The difficulty in determining natural background concentrations/levels for all areas of the state could make the setting of Numeric Limits or Action Levels impractical from an agency resource perspective."**

It is clear that the provisions on the Draft Construction permit are not consistent with the recommendations found in the referenced report. Further, it suggests that a "one size fits all" action level for turbidity is not warranted at this time.

Further, the language in this section is overly complex and confusing. It is unclear what is required of the discharger when it has been determined that an *action level* has been exceeded. As action levels are a new concept introduced into the Draft Construction Permit, clear and concise language should be utilized to outline requirements when action levels are exceeded. With overly technical protocols, and in consideration of the dynamic nature of construction activities, determinations of sources and actions to abate such sources will be unnecessarily delayed when requirements are unclear. The *actions* required when an action level is exceeded must be made clear in the permit language.

Page 18, Section IX.C.2

> *"At the minimum, the discharger shall stabilize all active disturbed areas regardless of time of year from all erosive forces, including rainfall, non-storm water runoff, and wind."*

Comment:
By definition, Active Disturbed Areas are areas where construction work is taking place. If those areas were to be stabilized there can be no construction activity. It is recommended that this requirement be deleted from the Permit.

Page 18, Section IX.E.3

> *"For areas under active construction, the discharger shall implement erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs."*

Comment:
Similar to the comment on Page 18, Section IX.C.2, if erosion control BMPs are implemented on active construction areas then construction work cannot proceed on those areas. It is recommended to delete this requirement from the Permit.

Page 19, Section IX.G

> *"1. If the soils to be exposed contain more than 10% (by weight) particle sizes smaller than 0.02 mm (medium silt), the discharger shall either deploy an ATS or comply with source control procedures described in Section VIII.G."*

Comments(s)
Active Treatment System (ATS)
It should be noted that the State Water Board convened Blue Ribbon Panel that prepared the report entitled ***"The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities,"*** dated June 19, 2006 has identified the following reservations and concerns

regarding Active Treatment Systems, and must be fully considered in regard to associated provisions:

- **"The active treatment systems have generally been employed on sites five acres or greater"**

- **"In consideration of using widespread use of active treatment systems, full consideration must be given to whether issues related to toxicity or other environmental effects of the use of chemicals has been fully answered."**

These reservations and concerns articulated in the statements above seem to suggest a level of analysis and consideration that is not clear within the permit. The permit provisions are ultimately inconsistent with the clear caution that the Blue Ribbon Panel has taken regarding the widespread use of ATS. At a minimum, provisions of the draft permit should be modified to allow for exceptions that are consistent with the findings of the Blue Ribbon Panel.

Further, the *Source Control Options* outlined in Section IX.G are overly prescriptive and ultimately unachievable, equating to a disincentive for dischargers to utilize anything other than ATS.

Page 21, Section IX.H.1.b

> *"Limit the areas of active construction to five acres at any one time."*

Comment:
On larger construction sites, limiting areas of active construction to 5 acres is impractical. It is recommended that local permitting agencies be provided with the discretion to include limiting criteria for active construction areas in their grading ordinances, particularly in those jurisdictions covered under a separate NPDES Municipal Permit.

Page 24, Section IX.J.2

> *"The discharger shall wash vehicles and streets in designated areas to prevent non-storm water discharges."*

Recommended language:
"The discharger shall wash vehicles and streets in such a manner as to prevent storm water discharges."

Page 24, Section IX.K.1

> *"The discharger shall, through the use of non-structural measures, ensure that the post-development runoff volume approximates the pre-project runoff volume for areas covered with impervious surfaces. The discharger shall obtain Regional Water Board approval for the use of any structural control measures used to comply with this requirement."*

Comment:
This requirement is already included in many NPDES Municipal Permits and its mention in the General Construction Permit is redundant. Moreover, post-construction runoff volumes are not something that can be controlled during the construction phase of projects. It is recommended to delete this requirement from the Permit or provide exception for those jurisdictions covered under a separate NPDES Municipal Permit.

In addition, the requirement to obtain Regional Water Board approval for use of structural control measures to manage the runoff volumes is impractical. Local permitting agencies normally have ordinances that regulate discharges into their storm drainage systems and are in a better position to make a determination as to the adequacy of any structural control measures. Therefore, the language should be revised to ensure that the uses of structural controls for runoff volumes are left to the discretion of the local permitting agencies, particularly in those jurisdictions covered under a separate NPDES Municipal Permit.

Page 25, Section IX.L.1

> *"A qualified SWPPP Practitioner shall conduct inspections and perform sampling and analysis at the dischargers project location."*

Comment:
It is recommended to revise this language so as to clarify that the SWPPP Practitioner certification requirement will not be applicable to local governmental agencies.

Page 28, Section XI.3

> *"The REAP shall be a written document specific for each rain event."*

Comment:
This section requires development of REAPs for each rain event. Rain events cannot be forecasted earlier than a few days in advance. Therefore, it is impractical to prepare REAPs for each rain event, include them in the SWPPP, and submit for review by the Regional Board, as required in Section XIII.3.

Page 54, Attachment B, Section 7.c

> *"The SWPPP shall describe the ATS's design capacity, including the treatment cell sizing calculations using 1.5 times the volume of the 10 year, 24-hour design storm event, and demonstrate that the ATS will appropriately capture and treat, within 48 hours, the range of storms from all of those storms more frequent than 1.5 times the 10 year, 24-hour design storm even(t) up to that design storm event. "*

Comment:
It is not practical to design treatment cell size for 1.5 times the volume of the 10-year, 24-hour design storm event. The requirement can be satisfied if separate storage facilities

are provided on site. It is recommended to revise the language to allow for separate storage facilities.

Page 55, Attachment D, Section 7.i.iii

> *"Discharge to an infiltration system with no discharge to surface water."*

Comment:
This option is irrelevant for many parts of coastal California where soil conditions do not allow infiltration. It is recommended to delete this option.

Page 55, Attachment B, Section 7.i.iv

> *"Truck hauling for proper disposal until the problem is corrected. If this corrective action is used, all contact information for the hauler and the disposal site shall be contained in the SWPPP."*

Comment:
This option is excessively and unreasonably expensive. It is recommended to delete this option.

Page 55, Attachment B, Section 8.a

> *"The SWPPP shall contain a copy of the soil report."*

Comment:
It is recommended to add "when available" at the end of the sentence in this section.

Page 57, Attachment B, Section 11.a

> *"The SWPPP shall include the calculations used to demonstrate compliance with the standards listed in Section VIII.J of the General Permit."*

Comment:
Section VIII.J referenced in this section does not exist. Please verify section numbering.