

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**RESPONSE TO COMMENTS**

ON THE REISSUANCE OF WASTE DISCHARGE REQUIREMENTS FOR:

USS-POSCO Industries  
900 Loveridge Road  
Pittsburg, CA 94565  
NPDES Permit No. CA0005002

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- I. USS-POSCO Industries' April 7, 2006 Comments and Response**  
**II. U.S. EPA's April 11, 2006 Comments and Response**  
**III. U.S. National Oceanic and Atmospheric Administration, National Marine Fisheries Service's (NOAA's NMFS) April 12, 2006 Comments and Response**

*Note: The format of this staff response begins with a brief introduction of the party's comments, followed with staff's response. Interested persons should refer to the original letters to ascertain the full substance and context of each comment.*

**IV. Editorial Changes**

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**I. USS-POSCO Industries' April 7, 2006 Comments and Response**

Comment 1.

*USS-POSCO Industries' facility actually removes dissolved copper from the intake water before returning it to the receiving water, and therefore, requests inclusion of an intake water credit for copper based upon studies, for total copper concentrations, October 28, 2002, and dissolved copper concentrations, March 16-23, 2006, of intake water concentrations versus effluent discharges.*

Response 1.

The Discharger has met the conditions specified in Section 1.4.4 of the SIP, Intake Water Credits, to qualify to receive intake water credit for copper based on these analyses and as discussed in the following addition to the Fact Sheet. To address this comment, we added Section IV.A.3. Intake Water Credit to the Tentative Order, Sections IV.A.3 and VI.A to the Fact Sheet (Attachment F), and added intake water monitoring locations, I-001 (Contra Costa Canal intake) and I-002 (San Joaquin River intake) to the MRP (Attachment E) as follows:

(Tentative Order)

**3. Intake Water Credit.**

The Discharger has met the conditions specified in Section 1.4.4, Intake Water Credits, of the SIP as discussed in detail in the Fact Sheet (Attachment F). The Discharger qualifies to receive intake water credit for copper as an alternative to complying with the concentration-based effluent limitations specified in IV.A.1.a of this Order. This credit is to offset high

levels of copper found in the intake water. Compliance with the concentration-based limitation for copper specified in IV.A.1.a of this Order shall be assessed as follows:

- a. Monitoring Requirements. The Discharger shall obtain monitoring samples in the intake, at Monitoring Locations I-001 and I-002, and in the effluent, at Monitoring Location M-001, during the same 24-hour period, as required in the attached MRP (Attachment E).
- b. Copper Intake Concentration. The Discharger shall use the weighted average of the monitoring samples' analytical results obtained from Monitoring Locations I-001 and I-002, as specified in Section IV.A.3.a of this Order, to determine the copper intake concentration. The weighted average shall be calculated as follows:

$$\text{Copper Intake Concentration} = (\text{Cu001} * \text{Q001} + \text{Cu002} * \text{Q002}) / \text{QTotal}$$

where: Cu001 = Cooper Concentration at Monitoring Location I-001  
Cu002 = Cooper Concentration at Monitoring Location I-002  
Q001 = Intake Flow at Monitoring Location I-001  
Q002 = Intake Flow at Monitoring Location I-002  
QTotal = Q001 + Q002

- c. Compliance Evaluation. If the effluent monitoring results indicate that the copper concentration is equal to or less than the Copper Intake Concentration, then the concentration limitations specified in IV.A.1.a of this Order are not applicable, and therefore, the discharge is in compliance. Otherwise, the effluent must comply with the effluent limitations specified in IV.A.1.a of this Order.

(Section D. Final Effluent Limitations of the Fact Sheet)

**1. Intake Water Credit.** As described below, the Discharger meets all the specified conditions in 40 CFR §122.45(g) and Section 1.4.4 of the SIP, and therefore, may receive intake water credit for copper.

- a. **40 CFR §122.45(g).** 40 CFR §122.45(g) allows credit for pollutants in intake water, in some cases where the facility is faced with situations in which limits are difficult or impossible to meet with BAT/BCT technology. Net credits are authorized only up to the extent necessary to meet the applicable limitation or standard, and if the intake water is taken from the same body of water into which the discharge is made.

In this case, it would be difficult for the Discharger to meet final WQBELs for copper with BAT/BCT technology. This is because copper is not used in any of the Facility's processes, and elevated concentrations appear to be an artifact of source water.

On the second condition, the discharge point is hydrologically connected to the intake source. Approximately 40% of the Discharger's intake water is from the San Joaquin River (part of the Delta system), and the intake structure is located approximately 1,600 feet upstream of Discharge Point 001. The balance of the Discharger's intake water comes from the Contra Costa Canal that also originates in the Delta approximately 10

miles east of Discharge Point 001. New York Slough, the effluent discharge receiving water, connects with the San Joaquin River just upstream of the confluence between the Sacramento and San Joaquin Rivers (the Delta System). The Contra Costa Canal Water is a part of the Delta system that flows to the San Joaquin River; therefore, it connects hydrologically to the receiving water. Comparisons of the San Joaquin River RMP station data and the Discharger's data, indicates reductions in copper concentrations in the Discharger's effluent discharge to New York Slough.

Based on these factors, Regional Water Board staff determined that the Discharger meets the conditions specified in 40 CFR §122.45(g) and that the intake water credit for copper in this Order is appropriate.

- b. Section 1.4.4 of the SIP.** The SIP allows intake water credits provided the Discharger meets the following conditions to the satisfaction of the Regional Water Board:
- 1) The observed maximum ambient background concentration and the intake water concentration of the pollutant exceed the most stringent applicable WQO/WQC for that pollutant – (discussed below);
  - 2) The intake water credits are consistent with any TMDL applicable to the discharge – (not applicable);
  - 3) The intake water is from the same water body as the receiving water body – (discussed below);
  - 4) The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses – (discussed below); and
  - 5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body – (discussed above).

*Ambient Background.* The Sacramento River station, which fits the definition for ambient background in the SIP, is upstream, not within a mixing zone, and does represent water that will mix with the discharge. The RMP station at Sacramento River has been sampled for most of the inorganic and some of the organic toxic pollutants during the period from 2000 to 2005, and during this period the RMP station measured concentrations of copper in six different samples. The maximum detected concentration measured was 4.61 µg/L, which is above the applicable WQO/WQC of 3.73 µg/L.

The Discharger measured copper in its intake water 9 times during the period 2000 to 2006. Copper was detected in all the samples, and the maximum detected concentration was 4.4 µg/L, which is above the applicable WQO/WQC of 3.73 µg/L.

*Further Studies, Protection of Beneficial Uses.* In March 2006, the Discharger measured dissolved copper in both intakes (San Joaquin River and Contra Costa Canal) and in the effluent discharge, and in seven out of the eight samples obtained, dissolved copper concentrations in the discharge were less than the weighted averages of the intake concentrations. As it is the dissolved form of copper that is toxic, based on these results, we believe that beneficial uses are protected.

(Section VI.A of the Fact Sheet)

**A. Influent Monitoring.** The MRP includes monitoring at intake points I-001 and I-002 for flow and copper concentrations should the Discharger want to receive intake water credit for copper as an alternative to complying with the concentration-based effluent limitations specified in IV.A.1.a in accordance with the requirements specified in IV.A.3 of this Order.

(The following monitoring locations were added to the table in Section II. Monitoring Locations of the MRP, Attachment E of the TO)

Intake Point Name	Monitoring Location Name	Monitoring Location Description
Contra Costa Canal	I-001	At any point in the intake line to the Facility, approximately 200 yards west of Loveridge Road, prior to any alteration, or process use in the Facility.
San Joaquin River	I-002	At any point after the intake pump, located approximately 1000 feet west of the Facility's dock, prior to any alteration, or process use in the Facility.

(The following monitoring requirements were added to Section III. Influent Monitoring Requirements of the MRP, Attachment E of the TO)

**A. Monitoring Locations – I-001 and I-002**

The Discharger shall monitor Contra Costa Canal and San Joaquin River intake waters at Monitoring Locations I-001 and I-002 as follows:

Parameter	Units <sup>[1]</sup>	Sample Type <sup>[2]</sup>	Minimum Sampling Frequency	Required Analytical Test Methods
Flow Rate	MGD	Continuous	Daily	
Copper	µg/L	C-24	Monthly	EPA 200.9

[1] Unit Abbreviations:

MGD = million gallons per day  
 µg/L = micrograms per liter

[2] Sample Type Abbreviations:

Continuous = Measured continuously, and recorded and reported daily  
 C-24 = 24-hour composite

**II. U.S. EPA's April 11, 2006 Comments and Response**

EPA Comment 1.

*We appreciate the effort and expertise of the Water Board staff, and we are pleased that this permit is moving forward for adoption.*

Response 1.

Comment acknowledged.

EPA Comment 2.

*In section IV.B.2 of the draft permit (top of page 12), a discussion of alternate limits for cyanide based on the draft cyanide site-specific objective (SSO) is presented. We recommend that you check with legal council to determine whether the language is appropriate.*

Response 2.

To address this comment, we modified Section IV.A.1.b Alternative Cyanide Effluent Limitation to include reference to the Fact Sheet that summarized the assumptions used in calculating the alternate limits. Additionally, the cyanide SSO would likely require pollution minimization measures. As such, VI.C.3 of the Tentative Order has also been revised to require the Discharger to implement those measures as a condition of receiving the alternate cyanide limits.

EPA Comment 3.

*Regarding the monitoring and report program, we recommend adding the following sentence to Attachment E, paragraph I.B., prior to the last sentence of the paragraph. "Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer following consultation with the State Water Quality Control Board's Quality Assurance Program."*

Response 3.

To address this comment, we modified General Monitoring Provisions I.B as follows (Changes are represented by underlines for inserted words):

- B.** Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Board's Quality Assurance Program. The Regional Water Board will find the Discharger in violation of the limitation if the discharge concentration exceeds the effluent limitation and the Reporting Level for the analysis for that constituent.

**III. NOAA NMFS' April 12, 2006 Comments and Response**

NMFS Comment 1.

*Available information indicates that the following listed species (Evolutionarily Significant Units) under the jurisdiction of NMFS may occur in the project area:*

- *Sacramento River winter-run Chinook salmon ESU*
- *Central Valley spring-run Chinook salmon ESU*
- *Central Valley steelhead DPS*
- *Central California Coast steelhead DPS*
- *North American Green Sturgeon southern DPS*

*The project site is located within an area identified as EFH for various life stages of fish species managed with the following Fishery Management Plans (FMP) under MSA:*

- *Pacific Groundfish FMP*
- *Coastal Pelagics FMP*
- *Pacific Coast Salmon FMP*

Response 1.

Comment acknowledged.

NFMS Comment 2.

*NMFS has had fish screening criteria for anadromous salmonids in place since 1997 that we recommend be followed to prevent unauthorized take of listed species. The California Department of Fish and Game also has fish screening criteria for anadromous salmonids and other species, including the ESA listed Delta smelt (managed by the U.S. Fish and Wildlife Service), that apply to this area. Both of these documents can be accessed through our website at: <http://swr.nmfs.noaa.gov/hcd/policies.htm>. We recommend that the facilities current screening be compared to these criteria to ensure that the beneficial uses at this site are being protected from impingement and entrainment.*

*Cooling water intakes are regulated under the Clean Water Act Section 316(b). The most recent proposed rule (Phase III facilities – November 2004) from the Environmental Protection Agency proposes to begin automatic coverage of facilities starting at an intake rate of 50 mgd. We would like to point out, however, that the regulation of small facilities is left to the discretion of the Director on a case-by-case basis. This discretion has been delegated to the State of California as part of the NPDES program delegation. That discretion falls to the Water Board for this facility. NMFS recommends that this facility be regulated as if it were already covered by the 316(b) regulations due to potential impacts to listed species and EFH.*

*Should this facility not be properly screened it is clearly within the authority of the Water Board to require an upgrade to this facility's cooling water intake system.*

Response 2.

We believe that beneficial uses are protected because the intake pump system (System) complies with both NMFS's and DF&G's screening criteria guidelines. These guidelines are as follows:

NMFS's 1997 *Fish Screening Criteria for Anadromous Salmonids* (Section K. Modified Criteria for Small Screens (Diversion Flow less than 40 cfs)) and DF&G's :

- The allowable approach velocity in Streams and Rivers is 0.8 feet per second (fps) for juvenile salmonids > 60 mm, 0.33 fps for fry-sized salmonids, and 0.2 fps for delta smelt; and
- For screen lengths greater than six feet, screen-to-flow angle must be less than 45 degrees.

The Facility's average and maximum intake demand are 0.6 mgd, and 4.3 mgd, respectively. The System's pump capacity is 11 cubic feet per second (cfs), with a velocity of 0.14 feet per second (fps), which meets NMFS and DF&G first criteria.

The Discharger’s intake pump is located within the deep water shipping channel, which is well below the lowest tide. The pump system has a traveling woven wire mesh screen with a 1/8” opening that is always wetted (below low tide). The current within the channel is substantial, and therefore, the traveling screen is oriented parallel to the channel. The screen is automatically cleaned, and manually rotated by the Discharger’s operators during each shift. All screen specifications and maintenance procedures meet NMFS and DF&G second criteria.

NFMS Comment 3.

*NFMS is also concerned about potential temperature effects from the discharge. This facility has a thermal plan exception that allows it to discharge wastewater at a temperature of 93°F. It is not clear from the draft permit when the last study regarding thermal impacts from this facility was conducted. However, the permit does note that the Water Board granted the exemption in 1976 and that it was upheld by the State Water Resources Control Board in 1979. This exemption is now 30 years old and a modern examination of whether this discharge temperature is adequate for the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife is likely in order. As with other facilities, NMFS would be willing to assist the Water Board in evaluating impacts of the discharge.*

Response 3.

To address this comment, we added Special Provision VI.C.2.d as follows:

**d. Thermal Plume Monitoring**

To determine whether the temperature of the discharge (at Discharge Point 001) is protective of beneficial uses, the Discharger shall:

<u>Task</u>	<u>Due Date</u>
Propose a Study Plan and an implementation schedule	November 1, 2006
Conduct Study in accordance with the study plan that incorporates any and all comments from the Executive Officer	February 1, 2007
Submit Final Report	In accordance with the Study Plan implementation schedule, but no later than February 1, 2009.

In submitting the proposed study, the Discharger shall also send copies to the California Department of Fish & Game, and National Oceanic and Atmospheric Administration – National Marine Fisheries Service. This study proposal is subject to the written approval of the Executive Officer.

**IV. Editorial Changes**

**E1.** Federal regulation requires that NPDES Permits include technology based effluent limits for pH, and that pH be regulated at Best Conventional Pollutant Control Technology

(BCT). The TO includes minimum and maximum limits for pH, and the following language was added to Section IV.A.4. of the TO to encourage implementation of a continuous pH monitoring device, a BCT. This addition is consistent with other permits issued by the Regional Water Board.

**4. pH**

The pH of the discharge shall not exceed 8.5 nor be less than 6.5 standard units. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:

- a. The total time during which the pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
- b. No individual excursion from the required range of pH values shall exceed 60 minutes.

**E2.** The following minor editorial was made to the TO to correct the basis for the cyanide compliance schedule. (Changes are represented by strikethroughs for deletions and underlines for inserted words):

Constituent	Reference for applicable standard	Maximum compliance schedule allowed	Compliance date and Basis
Cyanide	NTR	10 years	<b>April 28, 2010</b> (10 years from effective date of SIP). Basis is the <del>SIP</del> <u>Basin Plan</u>
Chlorodibromomethane, and Dichlorobromomethane	CTR	5 years	<b>5-yr, but no later than May 18, 2010</b> (this is 10 years from effective date of CTR/SIP). Basis is the CTR and SIP.

**E3.** Fact Sheet, p. F-28, 2.b. was also changed to correct the basis for the cyanide compliance schedule.