

**FACT SHEET STATEMENT OF BASIS
NUCOR STEEL
UPDES PERMIT NO. UT0023850
RENEWAL PERMIT
MINOR INDUSTRIAL**

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DESCRIPTION OF FACILITY:

Nucor Steel, a Division of Nucor Corporation is located at SW $\frac{1}{4}$, Section 4 and NW $\frac{1}{4}$, Section 9, Township 13 North, Range 3 West, Box Elder County, Utah about 2.5 miles west and 1.5 miles north of Plymouth, Utah: Latitude 41°52'37"; Longitude 112°11'22".

Nucor's Plymouth facility is a non-integrated steel mill (SIC Code 3312) which produces approximately one million tons of structural steel products annually. The principle process at Nucor Steel involves two Electric Arc Furnaces (EAF) for melting scrap metal, the molten metal is then continuously cast into billets and the billets are directed to one of the two hot rolling mills for shaping into final products.

There are wells that produce the process water and culinary water at the facility. One well has water of a high quality that no other treatment is necessary for use a culinary water supply and also for water needed for the steel mill process. As long as this well is producing water there will be no discharge. Nucor Steel has as a back-up option an Electrodialysis Reversal (EDR) treatment system which is used to remove dissolved solids from the well water from other wells. The wastewater from the EDR is discharged via outfall 001 to an open ditch then to the Malad River. Some of the wastewater from the EDR is used as dust suppression on the unpaved roads as per Nucor Steel's Air Quality Permit. All of Nucor Steel's sanitary wastewater is directed to one of 3 on-site septic systems.

DESCRIPTION OF DISCHARGE:

Nucor Steel has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. Nucor Steel has had one discharge event in the last 8 years. This discharge occurred because of the need to maintain the EDR treatment system. No violation of any permit limits were reported.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 41°52'37" and longitude 112°11'22". The discharge is piped to an un-named open ditch, which leads to the Malad River.

RECEIVING WATERS AND STREAM CLASSIFICATION

The discharge flows into an un-named open ditch and then to the Malad River. The receiving water is designated as follows:

Malad River - Class 2B and 3C

Class 2B -Protected for secondary contact recreation such as boating, wading, or similar uses.

Class 3C -Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

BASIS FOR EFFLUENT LIMITATIONS

The pH and total suspended solids (TSS) limits are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The oil and grease limit is based on best professional judgment and anti-backsliding policy. The wasteload analysis (see ADDENDUM) indicates that these limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters.

The Malad River does not include a stream classification that requires a TDS limit. However, a TDS limit is included in the permit to protect the Bear River, to which the Malad River flows. The TDS and dissolved oxygen limit is based on the wasteload analysis

Based on effluent monitoring data and the existing treatment facility, the permittee is expected to be able to comply with the limitations.

Effluent Limitations				
Parameter	Monthly Average	Maximum	Daily Minimum	Daily Maximum
		Weekly Average		
Flow, MGD	NA	NA	NA	0.72
TSS, mg/L	25	35	NA	NA
Oil & Grease, mg/L	NA	NA	NA	10
Dissolved Oxygen, mg/L	NA	NA	4.0	NA
pH, Standard Units	NA	NA	6.5	9
TDS, mg/L	NA	NA	NA	7000

SELF-MONITORING AND REPORTING REQUIREMENTS

The following effluent self-monitoring and reporting requirements are based on the *Utah Monitoring, Recording and Reporting Frequency Guidelines* as effective December 1, 1991. Reports shall be made on Discharge Monitoring Report (DMR) forms, and are due 28 days after the end of the month.

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Total Flow	Continuous	Recorder	MGD
TSS	Weekly	Grab	mg/L
Oil & Grease (a)	Weekly	Grab	mg/L
Dissolved Oxygen	Weekly	Grab	mg/L
pH	Weekly	Grab	SU
TDS	Weekly	Grab	mg/L

(a) Grab samples required only if sheen is observed or there is reason to believe that there are hydrocarbons present.

STORM WATER REQUIREMENTS

Nucor Steel previously obtained coverage under the UPDES Multi-Sector General Permit for Storm Water Discharges from Industrial Activity (General Permit Coverage No. UTR000532) and has developed a storm water pollution prevention plan as required by the general permit. The plan is available on-site for review.

In order to provide more efficient permitting, the general storm water permit provisions have been included in this individual permit. The coverage under the general storm water permit is automatically terminated upon the effective date of this individual permit.

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). All sections of the MSGP that pertain to discharges from Steel Mills have been included.

The permit requires the implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include: 1. The development of a pollution prevention team: 2. Development of drainage maps including areas where materials are stockpiled: 3. Best management practices utilized at the plant: 4. An inventory of exposed materials: 5. Spill reporting and response procedures: 6. A preventative maintenance program: 7. Employee training: 8. Certification that storm water discharges are not mixed with non-storm water discharges: 9. Compliance site evaluations and potential pollutant source identification, and: 10. Visual examinations of storm water discharges.

PRETREATMENT REQUIREMENTS

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (WET) Control (Biomonitoring (2/1991)). Authority to require effluent biomonitoring is provided in UAC R317-8, Utah Pollutant Discharge Elimination System and UAC R317-2, Water Quality Standards. The result of the wasteload analysis was a finding of no significant impact. Based on these considerations, and that the facility is not classified as a major or a significant minor facility, there is no reasonable potential for toxicity in Nucor Steel's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Matthew Garn, P.E.
Environmental Engineer
Utah Division of Water Quality
Drafted on June 16, 2011

PUBLIC NOTICE

Began:
Ended:
Public Noticed in

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