LPDES PERMIT NO. LA0003271, AI NO. 4007, ACTIVITY NO. PER20080001

LPDES STATEMENT OF BASIS
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

COMPANY/FACILITY: Morton International, Inc.
Weeks Island
P. O. Box 1496
New Iberia Louisiana 70562

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

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DATE PREPARED: June 18, 2009

I. PERMIT STATUS

A. Reason For Permit Action:

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415 and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX.Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. LPDES permit effective date: October 1, 2003
LPDES permit expiration date: September 30, 2008

C. Application was received on March 26, 2008.

II. FACILITY INFORMATION

A. Location:

11217 Morton Road, New Iberia, Louisiana
Latitude: 29° 48' 19", Longitude: 91° 48' 37.54"

B. Applicant Activity:

According to the application, Morton International, Inc., Weeks Island (Morton) is a rock salt mine. Various grades of mined rock salt products are produced at this facility. Rock salt is actively mined at levels of 1,200, 1,400 and 1,500 feet below ground. The material is hoisted to the surface and conveyed to a screening plant for grading. The screen plant processes approximately 1.8 million tons per year.

Washdown waters generated from the production of rock salt, wet scrubber dust collectors, general cleanup of rock salt collected from process activities and process area stormwater contribute to the process wastewater discharges of Outfall 001.

C. Technology Basis:

40 CFR Chapter I, Subchapter N, Effluent Guidelines and Standards, Parts 401, 405-417 and 421-471 as adopted by reference in LAC 33:IX.4903.

Guideline	Reference
NA	NA

Other sources of technology based limits:
Current Permit (Effective October 1, 2003)
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (USEPA)
Louisiana Water Quality Management Plan for Sanitary Dischargers
LDEQ Permitting Guidance document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan Volume 3, Version 6
Best Professional Judgment
General Permit LAG540000
General Permit LAG480000

D. Fee Rate:

1. Fee Rating Facility Type: Minor
2. Complexity Type: III
3. Wastewater Type: II
4. SIC codes: 1479

E. Continuous Facility Effluent Flow:

6.5 Million gallons per day (MGD)

III. RECEIVING WATERS:

A. New Iberia Southern Drainage Canal
1. Basin and Subsegment: Vermilion-Teche River Basin, Subsegment 060904
2. TSS (15%), mg/L: 400
3. Average Hardness, mg/L $CaCO_3$: 9.44
4. Critical Flow, cfs: 68.8
5. Harmonic Mean Flow, cfs: 206
6. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation and limited aquatic life and wildlife use.

B. Intracoastal Waterway
1. Basin and Subsegment: Vermilion-Teche River Basin, Subsegment 060906
2. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation and fish and wildlife propagation.

IV. OUTFALL INFORMATION:

Outfall 001:

A. Discharge Type:

The discharge of process wastewater, process area stormwater and treated sanitary wastewater (Internal Outfall 101).

B. Location:

At the point of discharge, from the northwest section of the facility between the production hoist and barge loading warehouse after commingling with the sanitary discharge of Internal Outfall 101, prior to mixing with other waters of the state at Latitude 29° 48' 25.78", Longitude 91° 48' 55.08".

C. Treatment:

None

D. Flow:

Continuous at 6.5 MGD

Internal Outfall 101

A. Discharge Type:

The discharge of treated sanitary wastewater.

B. Location:

At the point of discharge from the effluent pipe, after the commingling of the wastewater from all sanitary treatment units at Latitude 29° 48' 25.78", Longitude 91° 48' 55.08"

C. Treatment:

Aerobic digestion and chlorination

D. Flow:

Continuous at 10,361 GPD

Outfall 002

A. Discharge Type:

The discharge of process area stormwater.

B. Location:

At the point of discharge from the south of the process water intake slip, prior to mixing with other waters of the state at Latitude 29° 48' 10.75", Longitude 91° 49' 5.53".

C. Treatment:

None

D. Flow:

Intermittent at 1.7 MGD

V. PROPOSED CHANGES:

Morton has requested a reduction in Whole Effluent Toxicity (WET) testing frequency requirement from not less than once per quarter to not less that once per year. The facility has never failed this testing, but has not previously initiated a formal request and therefore requested this reduction as part of this permit application.

The proposed biomonitoring requirements were developed in accordance with USEPA Region 6

policy and biomonitoring protocol which has been established as a part of the permit reissuance process. It is the policy of USEPA that in order to request a decrease in monitoring frequency, the permittee is required to monitor for four (4) consecutive quarters upon the reissuance of a permit. Only upon completion of this monitoring period will a reduction in frequency be considered.

The department has issued a change in the dilution series for the WET testing from 5.6%, 7.46%, 9.95%, 13.26%, and 17.69% to 5%, 7%, 10%, 13% and 17%, respectfully. This change in policy is due to the laboratories difficulty ensuring the accuracy of the dilution.

VI. PERMIT LIMIT RATIONALE:

The following section sets forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. Also, set forth are any calculations or other explanations of the derivation of specific effluent limitation and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. Outfall 001:

The continuous discharge of process wastewater, process area stormwater and treated sanitary wastewater (Internal Outfall 101).

PARAMETER	MONTHLY AVERAGE	DAILY MAXIMUM	MONITORING FREQUENCY
Flow-MGD	Report	Report	Continuous
TSS (Net)	6593 lbs/day	13,192 lbs/day	3/week
Temperature °F	Report	Report	Continuous
Chlorides (as Cl), (Net)	Report	Report	1/week
pH Range Excursions > 60 Minutes	Report	Report	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	Report	Report	Continuous
pH(standard units)	6.0	9.0	Continuous

WHOLE EFFLUENT (CHRONIC) TOXICITY TESTING	MONTHLY AVERAGE MINIMUM (Percent%, Unless Stated)	7-DAY	MONITORING FREQUENCY
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, Menidia beryllina	Report	Report	1/quarter
NOEC, Value [%], Lethality, Static Renewal, 7-day chronic, Menidia beryllina	Report	Report	1/quarter
NOEC, Value [%], Growth, Static Renewal, 7-day Chronic, Menidia beryllina	Report	Report	1/quarter
NOEC, Pass/Fail [0/1], Growth, Static Renewal, 7-day Chronic, Menidia beryllina	Report	Report	1/quarter
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-day Chronic, Menidia beryllina	Report	Report	1/quarter
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, Mysidopis bahia	Report	Report	1/quarter
NOEC, Value [%], Lethality, Static Renewal, 7-day chronic, Mysidopis bahia	Report	Report	1/quarter
NOEC, Value [%], Growth, Static Renewal, 7-Day Chronic, Mysidopis bahia	Report	Report	1/quarter
NOEC, Pass/Fail [0/1] Growth, Static Renewal, 7-Day Chronic, Mysidopis bahia	Report	Report	1/quarter
NOEC, Value [%], Coefficient of Variation, Static Renewal, 7-Day Chronic, Mysidopis bahia	Report	Report	1/quarter

Site Specific Considerations for Outfall 001

Flow is established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored continuously with a recorder. These requirements have been retained from the current LPDES permit, effective on October 1, 2003.

TSS limitations and monitoring requirements are based on BPJ and established by calculating the loading based upon the average flow rates presented in the facility's 2001 and 2002 DMRs. TSS shall be monitored at a frequency of three (3) times per week, collected as a 24-hour composite sample and reported as net TSS. In order to obtain the net, the simultaneous monitoring of TSS in the intake water is required. These requirements have been retained from the current LPDES permit, effective on October 1, 2003.

Temperature reporting requirements are established in accordance with LAG480000 Light Commercial Permit Schedule F. Temperature shall be monitored continuously. This requirement has been retained from the current LPDES permit effective on October 1, 2003.

Chlorides are established in based on BPJ and similar outfalls at other facilities. Chlorides shall be monitored at a frequency of once per week, collected as a grab sample and reported as net Cl. In order to obtain the net, the simultaneous monitoring of chlorides as Cl in the intake water is required. These requirements have been retained from the current LPDES permit effective on October 1, 2003.

pH is established in accordance with LAC 33:IX.1113.C.1. pH shall be monitored continuously. These requirements have been retained from the current LPDES permit, effective on October 1, 2003.

Biomonitoring requirements are established based on BPJ, LDEQ Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan Volume 3. These requirements have been retained from the current LPDES permit, effective October 1, 2003.

B. Internal Outfall 101:

The intermittent discharge of treated sanitary wastewater.

PARAMETER	MONTHLY AVERAGE	WEEKLY AVERAGE	MONITORING FREQUENCY[1]
Flow-MGD	Report	Report	1/ month
BOD_5	30 mg/L	45 mg/L	1/ month
TSS	30 mg/L	45 mg/L	1/ month
Fecal Coliform[2]	200 colonies/100 ml	400 colonies/100 ml[3]	1/month
pH(standard units)	6.0	9.0	1/ month

1 When discharging

2 Future water quality studies may indicate potential toxicity from the presence of residual chlorine in the treatment facility's effluent. Therefore, a future Total Residual Chlorine limitation may be required if chlorine is used as a method of disinfection. In many cases, this becomes a NO MEASURABLE Total Residual Chlorine limitation. If such a limitation were imposed, the applicant would be required to provide for the dechlorination of the effluent prior to discharge.

3 Statistical basis shall be daily maximum in lieu of weekly average.

Site-Specific Considerations for Outfall 101

Flow is established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored at a frequency of once a month and reported on the DMR as an estimate. The limits have been retained from the current LPDES permit, effective on October 1, 2003.

BOD_5, TSS, pH and fecal coliform limitations and monitoring requirements are established based on LPDES Class II General Permit LAG540000. TSS shall be monitored at a frequency of once every month and collected as a grab sample. The limits have been retained from the current LPDES permit, effective on October 1, 2003.

C. Outfall 002

The discharge of process area stormwater.

PARAMETER	MONTHLY AVERAGE	DAILY MAXIMUM	MONITORING FREQUENCY
Flow-MGD	Report	Report	1/week
TOC	---	50 mg/L	1/week
Oil and Grease	---	15 mg/L	1/week
pH(standard units)	6.0	9.0	1/week

Site Specific Considerations for Outfall 002

Flow is established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored at a frequency of once per week and reported on the DMR as an estimate. These requirements have been retained from the current LPDES permit, effective on October 1, 2003.

TOC and Oil and Grease limitations and monitoring requirements are established in accordance with the LDEQ Storm Water Guidance. TOC and Oil and Grease shall be monitored at a frequency of once per week and collected as a grab sample. This requirement has been retained from the current LPDES permit effective on October 1, 2003.

pH is established in accordance with LAC 33:IX.1113.C.1. pH shall be monitored at a frequency of once per week and collected as a grab sample. These requirements have been retained from the current LPDES permit, effective on October 1, 2003.

VII. TMDL WATERBODIES:

Subsegment 060904, New Iberia Southern Drainage Canal is listed on EPA's Final TMDL list as impaired for suspended solids/turbidity/siltation and carbofuran. Subsegment 060906, Intracoastal Waterway is listed on EPA's final TMDL list as impaired for suspended solids/turbidity/siltation and carbofuran.

The State of Louisiana has established acceptable numeric turbidity guidelines for many of its streams including the Vermillion-Teche River Basin. The State has not established a numerical criterion for TSS. Turbidity listings on the court-ordered list almost always originated from the state's 305(b) or 303(d) lists while siltation and TSS listed waters originated largely from the state's nonpoint source list. EPA believes that since this duplicity occurs regularly it supports the belief that these duplicate listings were likely attributable to different ways of expressing the same concern of water impairment by different individuals charged with preparing 305(b) reports 303(d) lists or 319 assessments. Delisting has not been proposed for these segments in order to

comply with the strictest interpretation of the consent decree. Independent evaluations have been performed to evaluate TSS as a separate listing.

Numerous waters are included on the Louisiana court-ordered 303(d) list as impacted due to siltation. As with TSS, there are no numeric guidelines or criteria for siltation and there is little or no existing information available that would allow a direct evaluation of stream substrate conditions. Louisiana's water quality standards provide a link between suspended solids and bottom deposits, stating that floating, settleable and suspended solids shall not be present in quantities sufficient to cause long-term bottom deposits. For siltation, a water column measure, or indicator, may be used as a quantitative expression of water quality impacts. A water column characteristic that has been widely used as an indicator of the potential for sediment accumulation in streambeds is suspended sediment (EPA, 1999). Siltation may be described as the effect created as suspended matter from the water column settles to the stream bottom. Water column data for TSS is available from the Louisiana water-quality monitoring network. In this TMDL, TSS is used as an indicator for siltation or bottom deposits resulting from inorganic sediment loads.

Designated uses include primary contact recreation, secondary contact recreation and limited aquatic life and wildlife for Subsegment 060904. Subsegment 060906 designated uses include primary contact recreation, secondary contact recreation and fish and wildlife propagation. Numeric criteria for turbidity may be found in the LAC 33:IX.1113.B.9.Turbidity. This reads, "(a) Turbidity other than that of natural origin shall not cause substantial visual contrast with the natural appearance of the waters of the state or impair any designated water use."

As per the TMDL for TSS, turbidity and siltation for the 15 subsegments in the Vermilion River Basin, point source loads are so small as to be insignificant. Because effective policies are in place to limit TSS discharges, no specific reductions are in place to limit TSS discharges and no specific reductions from point sources are required. All TSS limits are to remain in effect as previously permitted.

Both Subsegment 060904 and 060906 are also listed for carbofuran. The most significant source of carbofuran in the Vermilion-Teche River Basin is from the application to rice fields to control the rice weevil. Land use analysis shows that in the Vermilion-Teche River Basin, 44% of the land area is cropland or pasture. There are no known point sources of carbofuran in the Vermilion-Teche River Basin and therefore no allocation was given to point sources..

VIII. BIOMONITORING REQUIREMENTS:

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 001 are as follows:

TOXICITY TESTS:

Chronic Static Renewal 7-day
Survival and Growth test
using Mysidopsis bahia
[Method 1007.0]

Chronic Static Renewal 7-day
Larval Survival and Growth test
using Menidia beryllina
[Method 1006.0]

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and salinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 5%, 7%, 10%, 13%, and 17%. The low-flow effluent concentration (critical dilution) is defined as 13% effluent.

IX . COMPLIANCE HISTORY/DMR REVIEW:

A. A file review of all DMRs submitted from January 1, 2007 through June 15, 2009 was conducted. The following excursions were noted.

Outfall	DMR Date	Violation	
101: Treated Sanitary Wastewater	01/01/07 – 01/31/07	Fecal Coliform	1464 colonies/100 ml
	02/01/07 – 02/28/07	Fecal Coliform	720 colonies/100 ml
	03/01/07 – 03/31/07	Fecal Coliform	2400 colonies/100 ml
	05/01/07 – 05/31/07	Fecal Coliform	957 colonies/100 ml
	06/01/07 – 06/30/07	Fecal Coliform	6143 colonies/100 ml
	07/01/07 – 07/31/07	Fecal Coliform	746 colonies/100 ml
		BOD_5	30.46 mg/L
	08/01/07 – 08/31/07	Fecal Coliform	746 colonies/100 ml
	08/01/08 – 08/31/08	Fecal Coliform	2074 colonies/100 ml
	09/01/08 – 09/30/08	Fecal Coliform	2046 colonies/100 ml

X. ENDANGERED SPECIES

The receiving waterbodies, Subsegments 060904 and 060906 of the Vermilion-Teche River Basin are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 18, 2008, from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

XI. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XII. TENTATIVE DETERMINATION

Based on preliminary staff review, the Department of Environmental Quality has made a tentative determination to permit for the discharge described in the application.

LDEQ-EDMS Document 42360722, Page 36 of 39

XIII. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing list