NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET
(pursuant to NAC 445A.236)

Applicant: James Hardie Building Products, Inc.
820 Sparks Drive
Cleburne, TX 76033

Permit Number: NEV2011501

Location: James Hardie Building Products
Tahoe Reno Industrial Center
3000 Waltham Way
McCarran, Storey County, Nevada 89434
Latitude: 39° 33' 9.72" N, Longitude: 119° 30' 5.40" W
Section 34, T20N, R22E MDB&M

Discharge Outfalls: **001**: James Hardie Zero Discharge Impoundment Outfall
Latitude: 39° 33' 9.72" N, Longitude: 119° 30' 5.40" W

002: Impoundment interstitial layer sump pump
Latitude: 39° 33' 9.72" N, Longitude: 119° 30' 5.40" W

General: The Permittee has applied for a 5-Year Groundwater Discharge Permit, NEV2011501, to discharge non-process and process water from manufacturing operations, to an on-site storage impoundment, located at 3000 Waltham Way, in Tahoe Reno Industrial (TRI) Center, in McCarran, in Storey County, Nevada. James Hardie Building Products, Inc. (Hardie) manufactures flooring and siding construction products for commercial distribution. Items manufactured at the TRI facility are composed of cellulose/fiber material, cement, and related pozzolanic materials. The material composition introduces residual mineral (primarily calcium hydroxide) and metals, including chromium, copper, and zinc, concentrations into process wastewater diverted for treatment and discharge. The manufacturing process currently recirculates a portion of the total daily fresh water supply, resulting in a daily water use of approximately 0.220 million gallons per day (MGD), with an associated discharge averaging between 0.165-0.184 MGD. All discharge is currently to the TRI wastewater treatment facility (WWTF), which is authorized by NEV2000502. Evaluation of periodic upsets to the sequential batch reactor (SBR) used at the TRI WWTF suggests that intermittent temperature spikes associated with the Hardie discharge cycles, may adversely affect the WWTF operation. Therefore, Hardie has elected to construct and use a 1.8-million gallon zero discharge impoundment to stabilize discharge characteristics and facilitate integrated wastewater management options, and provide process wastewater holding capacity for potential reuse or recirculation. The on-site equalization basin design consists of a 12-inch thick reinforced concrete primary liner, underlain by structural fill, and a 60-mil HDPE geomembrane secondary liner, and an interstitial leak detection and collection system. All leaks in the primary liner will be collected by the leak collection system and returned to the equalization basin. The impoundment may provide temporary holding capacity for on-site dust control use, or for evaporation or reuse in the manufacturing operations, or provide temporary holding capacity prior to discharge to the TRI Asamera Detention Basin, or to the TRI WWTF. A minimum of 2 feet of freeboard will be maintained in the impoundment at all times. Although the basin is designed to function as a zero discharge impoundment, the use of some of the water for on-site dust control is a potential discharge to groundwaters of the State. An existing distribution of wells surrounding the

Asamera Detention Basin has been approved for purposes of evaluating groundwater protection.

Flow: The facility's daily maximum flow is requested at 200 gallons per minute (gpm) and the 30-day average flow rate is requested at 0.220 MGD. Current operational daily maximum flow is 128 gpm, and the 30-day average flow rate is 0.184 MGD. Dust control usage is requested and permitted at a maximum of 50 gallons per minute for no more than 200 minutes per day, for a total of 10,000 gallons per day.

Receiving Water Characteristics: Groundwater in the area of the discharge is generally potable. Data collected in 2010 revealed TDS levels about 2,000 mg/l, and no other contaminants of concern were above State standards or limits.

Site Groundwater: The water table varies in depth from 175-200 feet below ground surface. Groundwater flow direction is dominated by preferential flow characteristics in fractured bedrock. Localized flow is primarily to the west, parallel to the Truckee River, with a subordinate flow direction towards the River, approximately one mile to the north.

Corrective Action Sites: There are no Bureau of Corrective Actions remediation sites within a one-mile radius of the facility.

Well Head and Drinking Water Supply Protection: The facility is within 6,000 feet of a public water supply, but outside of the 3,000-foot drinking water protection area (DWPA). The facility is not within an established Wellhead Protection Area (WHPA).

Proposed Discharge Limitations, Sampling and Monitoring Requirements: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge process and non-process water to the on-site zero discharge impoundment and for dust control. Quarterly reporting is required by the permit.

Table I. Discharge Limitations, Sampling and Monitoring Requirements

Parameters	Units	Discharge Limitations		Monitoring Requirements		
		30-Day Average	Daily Maximum	Sampling Locations	Monitoring Frequency	Monitoring Type
Discharge Flow Rate [1]	gpm	M&R	200	001	Daily	Totalizer
Discharge Flow Rate [1]	MGD	0.220	0.288	001	Daily	Calculation
Dust Control Use Rate [2]	gpm	M&R	50	001	Daily	Calculation
Dust Control Use Rate [2]	MGD	M&R	0.010	001	Daily	Calculation
Action Leakage Rate [3]	gpd/a	---	500	002	Weekly	Calculation
Temperature [4]	°F	M&R	M&R	001	Daily	Discrete
pH –SV [5]	S.U.	$6.0 \leq pH \leq 9.0$ [5]		001	Weekly	Discrete
TDS [6]	mg/l	---	M&R	001	Quarterly	Discrete
TSS [6]	mg/l	---	M&R	001	Quarterly	Discrete
Arsenic [7]	mg/l	---	M&R	001	Quarterly	Discrete
Chromium [7]	mg/l	---	M&R	001	Quarterly	Discrete

NOTES: **001 = Outfall 001, within the impoundment or at discharge outfall from impoundment;**
002 = Outfall 002, interstitial leak detection sump pump between primary and secondary liners.

gpm: gallons per minute
MGD: million gallons per day
gpd/a: average gallons per day per acre
M&R: Monitor & Report
SV: single value
S.U.: Standard pH units

TDS: Total Dissolved Solids TSS: Total Suspended Solids mg/l: milligrams per liter

1. Monitor daily and report, the total daily discharge to the impoundment. Report flow as daily maximum and 30-day average.
2. Monitor daily and report, the discharge from the on-site impoundment for dust control use applications. Report dust control discharge rate as daily maximum and 30-day average.
3. Monitor weekly and report, the action leakage rate (ALR) from the primary liner to the secondary liner. When the ALR exceeds 125 gpd/a, the facility shall submit a plan to the Division, within 30 days of detection, to identify the leakage source. When the ALR exceeds 250 gpd/a, the facility shall implement the plan. When the ALR exceeds the permit limit of 500 gpd/a, the facility shall notify the Division in writing within 5 business days, cease discharge to the impoundment and implement necessary corrective action measures to mitigate the liner leakage.
4. Monitor daily and report, the daily maximum and 30-day average temperature values.
5. Monitor weekly and report, the minimum and maximum pH values.
6. Sample and report, the maximum TDS and TSS concentration values.
7. Sample and report, the maximum, total recoverable, Arsenic and Chromium concentration concentrations.

Rationale for Permit Requirements: The Division has established the monitoring requirements in Table I. to ensure that waters of the State are not degraded as a result of project activities.

Flow: Maximum daily flow -200 gpm; 30-day average flow -0.220 MGD. The rationale for the maximum and 30-day average daily discharge limits was explained in the Flow section of this fact sheet.

Action Leakage Rate: 500 gpd/acre. To ensure that the impoundment is zero discharge, leak detection and collection between the primary and secondary liners is monitored. A stepped plan of action is required per Sampling Table Footnote 3.

Temperature: M&R. Sample daily to gain information on impoundment supernatant quality should direct discharge to the TRI WWTP facility occur.

pH: 6.0-9.0 SU. Sample weekly to gain information on impoundment supernatant quality should a catastrophic leak in the liner system occur.

TDS & TSS: M&R. Sample quarterly to gain information on impoundment supernatant quality should a catastrophic leak in the liner system occur.

Arsenic and Chromium: M&R. Sample quarterly to gain information on impoundment supernatant quality should a catastrophic leak in the liner system occur.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance:

- The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- Within 90 days of the permit effective date (**MM DD, 2010**), the Permittee shall submit to the Division, for review and approval, an updated Operations & Maintenance (O&M) Manual prepared in accordance with the Division's WTS-2 guidance: *Minimum Information Required for an Operations and Maintenance Manual*. The O&M Manual shall include information on the operation and maintenance of the impoundment and leakage collection and detection system.

All schedule of compliance submittals and evidence of compliance documents shall be submitted to the Bureau of Water Pollution Control Compliance Coordinator at the address listed below:

Division of Environmental Protection
Bureau of Water Pollution Control
ATTN: Compliance Coordinator
901 S. Stewart Street, Suite 4001
Carson City, Nevada 89701

Before implementing changes to an approved O&M Manual, the Permittee shall submit proposed changes to the Division for review and approval.

Proposed Determination: The Division has made the tentative determination to issue the proposed renewal permit for a period of five (5) years.

Procedures for Public Comment: The Notice of the Division's intent to issue a new groundwater discharge permit authorizing this facility to discharge to groundwaters of the State for a five-year period, subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** and to the **Comstock Chronicle** for publication. The Notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **December 27, 2010 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Jeryl R. Gardner, P.E.
Date: November, 2010