STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division
National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0070262

PERMITTEE:	Recovery Technology Solutions		
FACILITY NAME:	Recovery Technology Solutions		
RECEIVING WATER:	Chub Creek		
CITY OR TOWNSHIP:	Randolph	**COUNTY:**	Dakota
ISSUANCE DATE:		**EXPIRATION DATE:**	

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to construct, install and operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and US statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090, and the US Clean Water Act.

This permit is effective on the issuance date identified above. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E.
Supervisor, Water Quality Permits Unit
Water Section
Industrial Division

for The Minnesota Pollution Control Agency

DMRs are to be submitted electronically at:
https://netweb.pca.state.mn.us/private/

Submit Other WQ Reports to:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact: Jennifer Satnik, 651-757-2692.
- For specific permit requirements or permit compliance status, contact: Chandi McCracken, 651-757-2232.
- General permit or NPDES program questions, contact: MPCA, 651-282-6143 or 1-800-657-3938.

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Facility Description

Recovery Technology Solution (RTS) is proposing construction of a new industrial facility to be located in the city of Randolph Great Western Industrial Park. Physically, the facility will be located in the NW¼ of the SE¼ of the NW¼ Sec. 5, T112N, R18W [284th Street East, Randolph, Dakota County].

The proposed facility will be a recycled asphalt shingle (RAS) asphalt extraction plant with a processing capacity of 200 tons per day of RAS. RTS will receive RAS via side sump rail cars and also by dumpsters delivered by trucks. Raw shingles will be stored outdoors before being sent to grinding. Ground shingles will be stored in a storage building before being sent to the extraction process.

In the extraction process, ground shingles will be put in contact with the liquid hydrocarbon solvent toluene. The solvent dissolves the asphalt out of the shingles forming miscella, which is a mixture of toluene, water and asphalt. Sand, fiberglass, granules, and other materials are left behind as by-products. These by-products are further processed to recover the solvent. A series of steam trays in a desolventizer/toaster (DT) are used to evaporate off the toluene from the by-products. To recover the toluene from the miscella, it is sent through a series of evaporators. Industrial process wastewater collects in the extraction skim pit. This waste stream is regulated as station WS 001 and must be treated and pollutant levels reduced to meet technology-based effluent limitations prior to co-mingling with other waste streams. The Permittee has proposed treatment of this waste stream through an air stripper followed by granular activated carbon.

There are a number of processes contributing to the overall wastewater discharge from the proposed new facility. Raw well water will be used in the rotochopper cooling/dust control process. Water will be added to the RAS during grinding to reduce minimize heat from friction within the machine and for dust control. Water for use in the boiler and cooling towers is pretreated through a sand filter followed by purification to remove naturally occurring materials in a reverse osmosis system. The resulting water stream is routed directly to the cooling towers, or softened before use in the boiler.

Discharge Waste Streams:

Process	Gallons/Day
Sand Filter Backwash	2,880
RO Reject	1,440
Cooling Tower Blowdown	15,840
Softener Regenerant	Recycled*
Boiler Blowdown	1,440
Shredded Material Drainage	Recycled*
Extraction Skim Pit	8,640
Total	30,240

The permittee proposes a total facility discharge (excepting stormwater) discharge to Chub Creek via an underground pipe paralleling the Chicago and Northwestern Railroad tracks (from the facility to surface waters is ≈1.16 miles). This discharge is regulated as station SD 001.

This permit also will authorize the discharge of stormwater associated with industrial activities.