



Prepared for
Consumers Energy Company

RUN-ON and RUN-OFF CONTROL PLAN
for the
CONSUMERS WEADOCK COMPLEX
J.C. WEADOCK SOLID WASTE DISPOSAL AREA
Essexville, Michigan

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1. INTRODUCTION

The purpose of this plan is to document the run-on and run-off control system to be utilized during the landfill operation for the J.C. Weadock Solid Disposal Area at the Consumers Weadock Complex located in Essexville, Michigan. This plan was prepared to comply with the United States Environmental Protection Agency's Coal Combustion Residual (CCR) Rules, 40 CFR § 257.81 – Run-on and Run-off Controls for CCR Landfills

The D.E. Karn/J.C. Weadock Generating Complex consists of two power generating plants (Karn and Weadock), and is owned and operated by Consumers Energy Company (CEC). The Consumers Weadock Complex consists of two (2) burning units designated as Units 7 and 8, which became operational in 1955 and 1958, respectively and retired on April 15, 2016. Part of CCRs from the Karn power plant units are transported to the Consumers Weadock Complex Solid Waste Disposal Area (Landfill).

The original Landfill consisted of a perimeter containment dike reportedly designed with an approximate top crest elevation of 590 feet (NAVD 88). In 1971, a new perimeter dike was constructed along the eastern portion of the Facility to elevations matching the original perimeter containment dikes of approximately 590 feet. A former bottom ash pond is located to the west of the Landfill. The extent of the Landfill, the perimeter berm, and the former bottom ash pond are presented in **Figure 1**.

The Landfill has an operating license issued by the Michigan Department of Environmental Quality (MDEQ) as a low-hazard industrial waste (Type III) landfill. The Landfill is regulated under Construction Permit No. 0260, dated April 21, 1992, and the Solid Waste Landfill Operating License No. 9440, dated June 26, 2015.

2. RUN-ON CONTROL

A run-on control system to prevent flow onto the active portion of the Landfill has to be maintained during the peak discharge from a 24-hour, 25-year storm in accordance with 40 CFR § 257.81(a)(1).

The Weadock Landfill is contained with a perimeter berm with a crest elevation of approximately 590 feet (NAVD 88). As shown in **Figure 1**, the only source for the run-on flow is from intermittent stormwater flows from the former bottom ash pond at the west of the permitted CCR landfill; this intermittent flow will be controlled by diverting the flow to the northern trench that will lead to the NPDES permitted discharge outfall.

3. RUN-OFF CONTROL

A run-off control system for the active portion of the Landfill has to be maintained to collect and control at least the stormwater volume resulting from a 24-hour, 25-year storm in accordance with 40 CFR § 257.81(a)(2).

The Weadock Landfill is contained with a perimeter berm with a crest elevation of approximately 590 feet. The perimeter berm prevents uncontrolled runoff outside the permitted CCR landfill. The design storm is predicted to generate 3.56 inches of rainfall¹. The drainage ditch inside of the perimeter berm will be maintained to divert the run-off flow to the permitted NPDES discharge outfall, as shown in **Figure 1**.

Based on the site history and according to operation personnel, the Landfill has not experienced runoff, other than through the permitted discharged, in over 40 years of operation, during which time the 24-hour, 25-year storm has occurred or exceeded (on 21 June 1996, a 6-in daily rainfall was recorded and on 11 August 2012, a 3.03-in daily rainfall was recorded²). This demonstrates it has adequate capacity to retain and convey the stormwater to permitted NPDES discharge outfall.

The handling of the surface water flow to the NPDES permitted discharge outfall meets the surface water requirements under CCR rule (40 CFR § 257.3-3) as required by the CCR rule (40 CFR § 257.81(b)).

¹ Rainfall Frequency Atlas of the Midwest, Bulletin 71, By Floyd A. Huff and James R. Angel.


² National Weather Service Forecast Office (<https://www.weather.gov>)

4. PLAN UPDATES

The plan will be amended, during the Landfill operation period, as required by 40 CFR § 257.81(c)(2). In addition, the run-on and run-off control plan will be updated every five years in accordance with 40 CFR § 257.81(c)(4).

5. CERTIFICATION

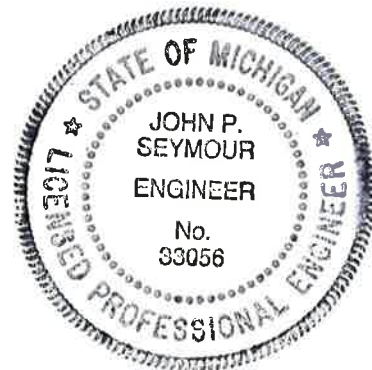
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of 40 CFR Part 257.81(c). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



John Seymour, Michigan P.E. #6201033056

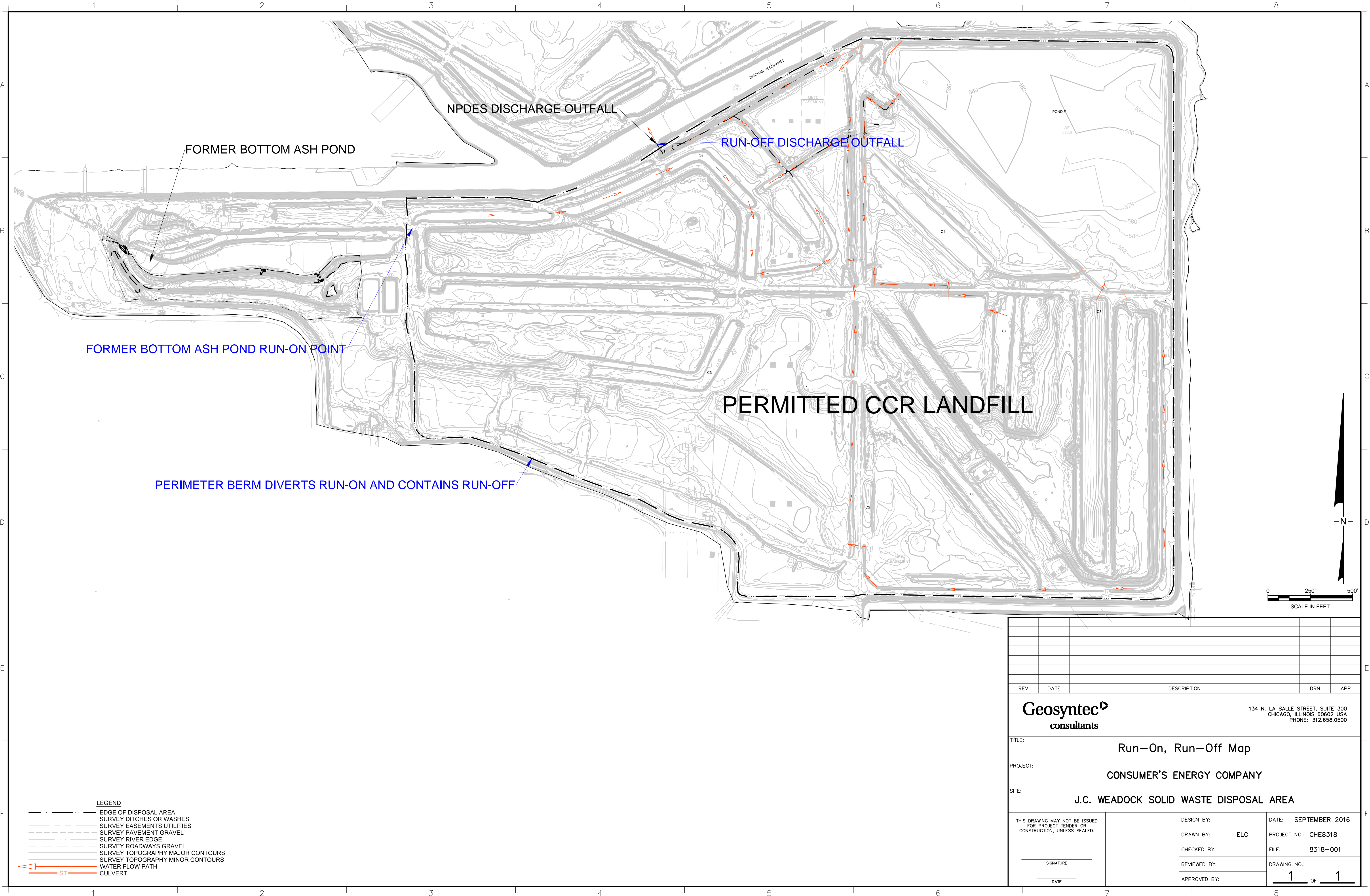
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Date



FIGURE

M:\C\CONSUMER'S ENERGY WEADOCK - CHE8318 (DRAWINGS)\8318-001 RUN-ON/RUN-OFF MAP



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