

Date : 11/25/2024  
Project No : 2024C288  
Client Company : DRH  
Arrival Time : 11/25/2024  
Onsite Hours :

ASEC Report ID : 76158  
Name of the Project : Brookland Commons - Site Development  
Project Location : Monroe  
Weather : sunny  
Departure Time : 11/25/2024  
ASEC Technician Name : Russell Hendrix

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As requested, the site was visited by our AS Engineering and Consulting (ASEC) representative for the purpose of providing quality control inspection and testing services. Visual observation techniques were employed to verify compliance with project drawing/specifications, applicable codes, and materials submittals. The following observations were observed on site this day:

### **Introduction:**

Upon arrival at the dam construction site, a detailed assessment of the ongoing work was performed. The construction of a small dam was observed with approximate dimensions of 115 feet in length and 10 feet in width. Various pieces of equipment were noted to be in use during the observation period, which included a John Deere 180G excavator, Sakai SU510TB ride-on vibratory sheepsfoot roller, a Caterpillar 953 bulldozer, and an off-road tandem dump truck. Soil for the construction was being delivered from an off-site borrow location.

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### **Observations:**

#### **2.1 Dam Specifications:**

- **Length:** 115 feet
- **Width:** 10 feet
- **Construction Material:** Primarily soil fill material, specifically a red sandy silt.

#### **2.2 Equipment on Site:**

- **John Deere 180G Excavator:** Used for excavation and material handling.
- **Sakai SU510TB Ride-On Vibratory Sheepsfoot Roller:** Used for compacting the soil fill material.
- **Caterpillar 953 Bulldozer:** Used for grading and moving material.
- **Off-Road Tandem Dump Truck:** Used for transporting the soil fill material from on-site delivery.

**2.3 Soil Material and Fill Concerns:** A discussion regarding the soil fill material used for the dam construction was held with the project manager, Dave, foreman Hugo, and Mr. Ram Mogulla from ASEC. The main concern raised was the low content of clay in the fill material. However, Mr. Mogulla confirmed that the amount of clay present in the material appeared acceptable for the purposes of this dam construction.

**2.4 Soil Testing and Results:** The soil material was tested using a Troxler 3430 (Serial #29588) with the following proctor:

- **Density-Moisture Relationship:**

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- **Dry Density:** 96.8 lbs/ft<sup>3</sup>
  - **Optimum Moisture Content:** 24%
  - **Soil Type:** Red Sandy Silt (Specific results and testing documentation are available in the attached density report.)

**2.5 Construction Progress:** At the time of the visit, only one lift of the dam was completed. This lift was approximately 12 to 16 inches thick and was completed at an elevation of -1 (1 foot below finished elevation). The soil compaction in this lift met the required standards and was deemed acceptable.

**2.6 Future Work:** The next and final lift for the dam had not been completed at the time of observation. No further compaction or construction work was conducted during the visit.

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### 3. Conclusion:

The dam construction is progressing as planned, with the lift of the dam completed and meeting the required standards for density and moisture content. The material used, while showing a lower content of clay, was deemed acceptable by the ASEC engineer, Mr. Ram Mogulla. No concerns were raised regarding the equipment on-site or the ongoing construction process. The final lift remains to be completed, but no further observations were made during this visit.

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### 4. Recommendations:

- Observe the final lift placement and compaction as per the job specifications.
- Continue observed soil material delivery and compaction.
- Perform additional soil testing if there are any further concerns regarding the fill material.

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Dam construction



Dam construction



Nuclear testing



Dam compaction

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Dam



Dam construction

*Kenneth Mosman*

**Kenneth Mosman**

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