Memorandum

CITY OF DALLAS

DATE December 5, 2008

TO Council Transportation and Environment Committee:
Linda Koop, Chair; Sheffie Kadane, Vice Chair; Jerry R. Allen, Carolyn R. Davis, Vonciel Jones Hill, Angela Hunt, Pauline Medrano, Ron Natinsky

SUBJECT Southside Wastewater Treatment Plant
Dewatering Facility Project

Attached is the material for the briefing that will be presented on Monday, December 8, 2008 regarding the Dewatering Facility Project at the Southside Wastewater Treatment Plant (SWWTP).

This project involves the design of a new dewatering facility at SWWTP which will separate the water and solids generated during the wastewater treatment process and provide for solids disposal on dedicated land disposal fields.

Please contact me if you require additional information.

Ramon F. Miguez, P.E.
Assistant City Manager

Attachment

c: The Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Thomas P. Perkins Jr., City Attorney
Deborah Watkins, City Secretary
Craig Kinton, City Auditor
Judge C. Victor Lander, Administrative Judge
Ryan S. Evans, First Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
A.C. Gonzalez, Assistant City Manager
Forest Turner, Interim Assistant City Manager
David Cook, Chief Financial Officer
Jeanne Chipperfield, Director, Office of Financial Services
Edward Scott, Controller, Office of Financial Services
Helena Stevens-Thompson, Assistant to the City Manager
Jody Puckett, P.E., Director, Dallas Water Utilities

City of Dallas - Water Utilities Department

Southside Wastewater Treatment Plant Dewatering Facility Project

Presented to the TEC
December 8, 2008

Briefing Objective

- Provide an update on the Southside Wastewater Treatment Plant Dewatering Facility Project
- Seek approval from the Transportation and Environment Committee to award a supplemental agreement for additional engineering services for the project

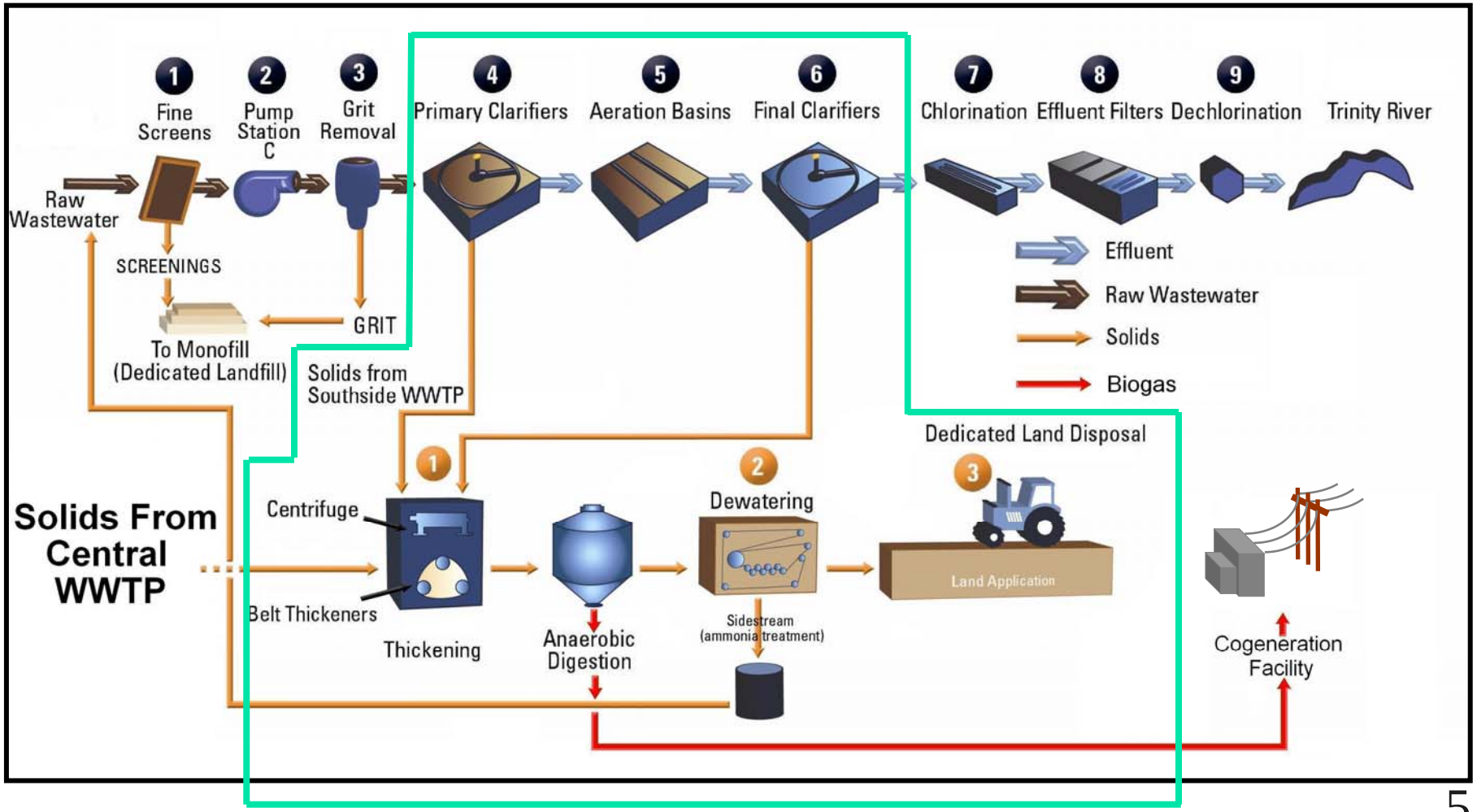
Briefing Outline

- Function of Dewatering Facility
- Southside Wastewater Treatment Process Overview
- Project Driver
- Why a Pilot Facility?
- New Dewatering Project History
- Supplemental Agreement No. 1 Components
- Overall Schedule
- Additional Information on New Facility
- Architectural Rendering
- Summary
- Questions?

Function of Dewatering Facility

- Sludge produced at both of the City's wastewater treatment plants are consolidated and disposed of at Southside Wastewater Treatment Plant
- **Dewatering facility utilizes belt filter presses to separate liquid (filtrate) and solids in the sludge**
- Process reduces the volume of solids and makes disposal more manageable and cost effective
- Remaining solids are disposed on the dedicated land fields within Southside Wastewater Treatment Plant

Southside Wastewater Treatment Plant – Process Overview

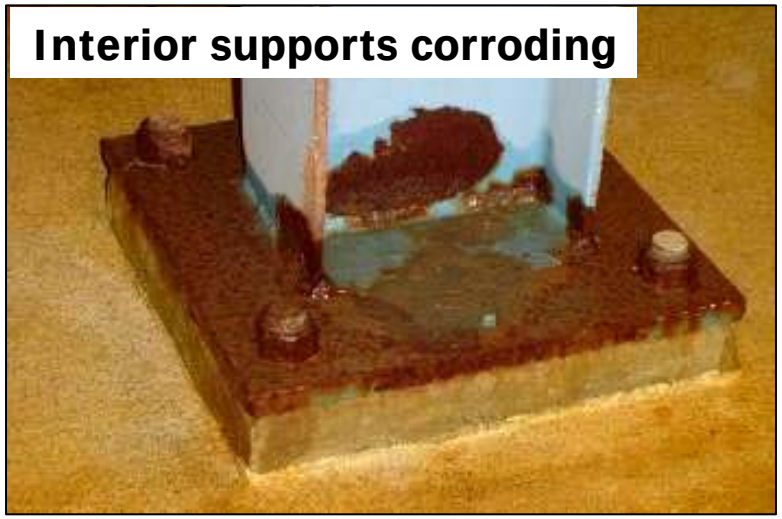


Project Driver

- Existing dewatering facility was constructed in 1989 and was intended to be a pilot facility with a service life of 10 years

Project Driver (cont'd)

- Facility has now been in operation for almost 20 years and is experiencing severe deterioration



Why Pilot Facility?

- **Prior to mid-1980's –** Sludge was sent to lagoons and ponds prior to disposal
  - Wet process—lots of volume
  - Odorous
  - Very Expensive
- **Mid-80's –** Belt presses emerged and was considered as new technology
- **1989 –** Temporary dewatering facility was installed
  - Steel building
  - Little information available about hydrogen sulfide, etc.—much more corrosive than originally anticipated
  - **Validated it is much more cost effective to dewater sludge prior to disposal**

New Dewatering Facility Project History

- **June 1997 –** Project identified in Sludge Master Plan completed by CH2MHill
- **February 2005 -** Malcolm Pirnie was hired to evaluate the condition of the existing dewatering facility ($389,855)
- **January 2006 -** Final evaluation report concluded that constructing a new facility would be more cost effective than rehabilitating the existing facility
- **June 2006 -** City entered into a contract with Malcolm Pirnie for the pre-design and design of a new dewatering facility and support facilities ($2,785,165)
- **December 2008 -** Overall design of the dewatering facility is 80% complete with final completion estimated in February 2009

Supplemental Agreement No. 1

- **Value engineering to complete design - $463,349**
  - Design storm water pump station, in lieu of regrading the entire site (Potential Savings - $2 million)
  - Design pump station to take wash water directly to head of the plant, in lieu of advance treatment at the sidestream facility (Potential Savings - $6.5 million)
  - Provide alternate designs to accommodate multiple belt filter press manufacturers and avoid “sole sourcing” equipment (Potential Savings - $1 million)
  - Additional analysis for direct loading onto trucks to eliminate 2 hoppers (Potential Savings - $1.5 million)
  - Design new solids operation support facility to improve operational and maintenance efficiency (Potential Savings - $1 million)
  - **Potential cost savings of $12M**

Supplemental Agreement No. 1

- **Planned Project Activities - $1,320,136**
  - Provide construction administration services
  - Includes monthly construction site visits, review of submittals, preparation of record drawings, assistance with start-up of the facility, etc.
  - 24-month duration

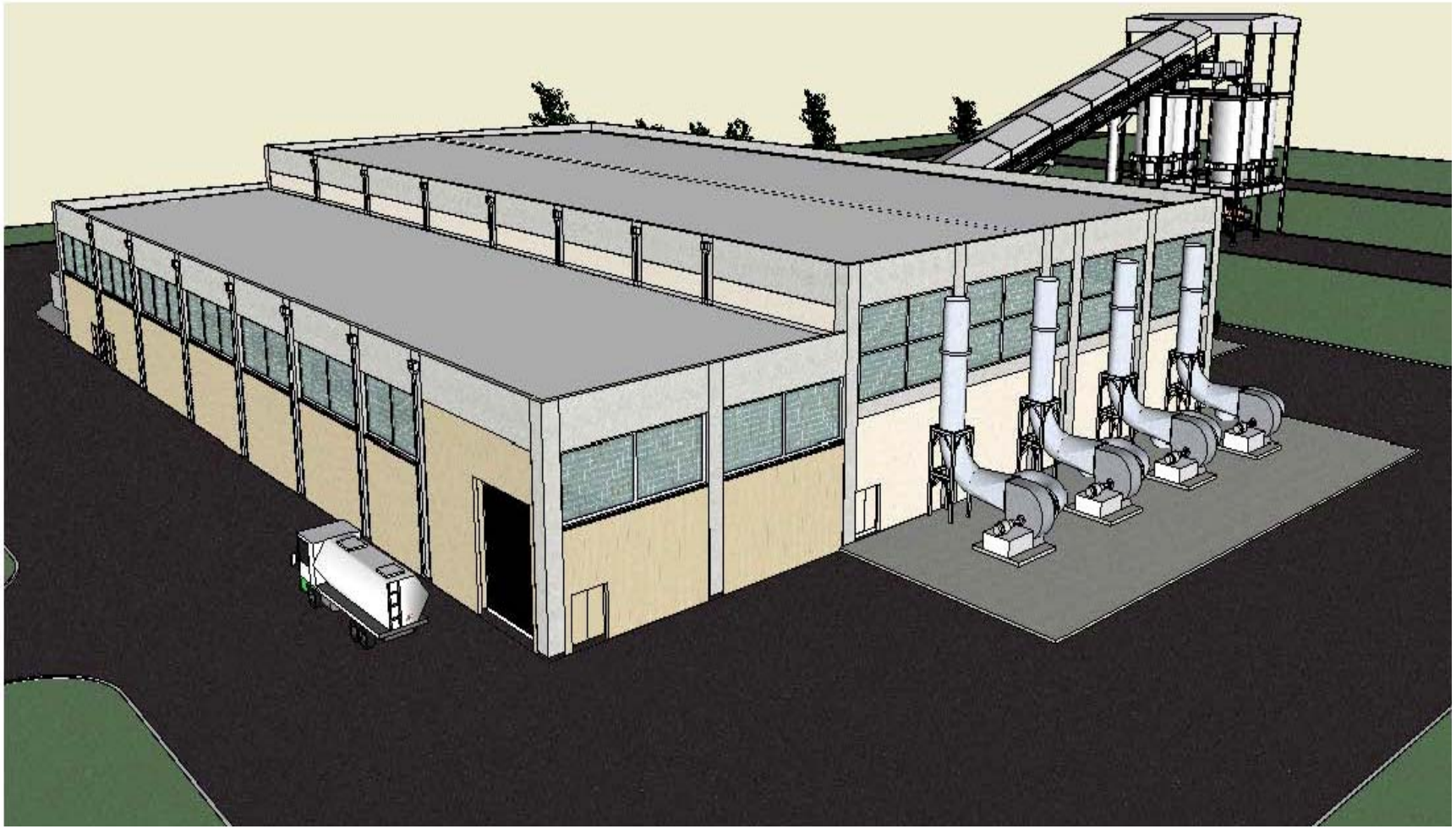
Overall Schedule

- **December 10, 2008 –** Award supplemental agreement No. 1 to Malcolm Pirnie for additional services
  - Activities to complete design – $463,349
  - Planned project activities – $1,320,136
  - Total – $1,783,485
- **March 2009 –** Advertise project for construction (estimated cost $39 million)
- **June 10, 2009 –** Award through City Council
- **July 2009 –** Issue “Notice to Proceed”
- **July 2011 –** Facility start-up and testing

Additional Information

- Dewatering facility - 47,000 square feet
- Solids operation facility – 3,000 square feet
- Mostly made of concrete, masonry and glass
- Considered as an industrial facility
- **LEED Certification – goal of Silver rating**

Architectural Rendering



Summary

- Badly deteriorated facility needs replacement
- Project requires additional engineering services to complete design plans and provide construction services during construction
- **Recommend that the TEC support approval of the supplemental agreement through City Council on December 10, 2008 – Agenda Item #77**

Questions?