Suncor Dover In-Situ Oil Sands Project

Commercial Scheme Approval No. 9044

2011 Project Update to the Energy Resources Conservation Board

November 30, 2011

SUNCOR ENERGY

Introduction

- The Suncor Dover Facility is a pilot scale enhanced recovery in situ heavy oil facility licensed to recover 700m3/d of crude bitumen.
- The Dover Facility is located in the Athabasca Oil Sands Area, approximately 45 km northwest of Fort McMurray and 25 km southwest of Fort McKay
- Dover started in 1986 with the development of the Underground Test Facility or UTF.
- Dover was a government-industry partnership formed to pilot a “new” method of steaming bitumen out of the oil sands.
- This new method has evolved into what is known today as steam-assisted gravity drainage or SAGD.

SUNCOR ENERGY

Background

- The main components of the Dover Facility are:
- The Underground Test Facility (UTF) with 6 underground Steam Assisted Gravity Drainage (SAGD) Well Pairs (Phase A and Phase B)
- 1 Phase C surface well pair for HASDRIVE Trial (1987)
- 5 surface SAGD Well Pairs
  - Phase D (2 SAGD Well Pairs) commenced production in 1996
  - Phase E (1 SAGD Well Pair) commenced production in 1999
  - Phase F (1 SAGD Well Pair) commenced production in 2003
  - Phase G (1 SAGD Well Pair) commenced production in 2003
- Surface Facilities and Equipment
  - for Steam Generation, Water Treatment (includes the Produced Water Recycle Plant (PWR)) and Bitumen Separation
- Dover VAPEX Pilot (known as DOVAP) consisting of 2 well pairs and associated observation wells and surface facilities
- All operations at Dover suspended in 2006

SUNCOR ENERGY

Dover Site


93-12-18 W4 Lsd 4
T
DOVAP Wells Area
93-12-18 W4 Lsd 3
M
Wellsite and Group Separator Building- MCC Room
93-12-18 W4 Lsd 2
R
Tank (propane)
S
Mine Water Treatment Pond and Pumphouse
F
Flare Area
Q
Warehouse Hangar / Lay Down Area
E
P
Mud Disposal Pond #1
D
Production Building
O
Mud Disposal Pond #2
C
Steam Generation Building
B
Process Water Recycle
93-12-7 W4 Lsd 14
N
Vertical Tank Lay Down Area
93-12-7 W4 Lsd 15
V
Mud Disposal Pond
A
"Bone Yard" Surplus Lay Down Area

Dover Recent Approvals

- ERCB Approval No. 9044H – December 17, 2010
  - Decommissioning of UTF Mine
- ERCB Approval No. 9044I – May 27, 2011
  - Revision of Principle Development Area
- EPEA Approval 705-02-00 – June 30, 2010
  - 10 Year Renewal – expiry date May 31, 2020

Environmental Monitoring & Reporting

Air Monitoring

- Two passive air monitoring stations located at the Dover facility - measure H2S and SO2
- No air quality exceedances at Dover facility

Soil Quality Monitoring

- 2009 soil management program report submitted to AEW by March 31st, 2010
- To date no soil quality impacts identified

Environmental Monitoring & Reporting

Water Monitoring

- Ongoing groundwater monitoring
  - Groundwater monitoring report submitted to AEW on March 31st of every year.
  - To date no groundwater impacts identified
- Surface water quality
  - Ongoing (semi annually) as part of groundwater report.
  - To date no surface water quality impacts identified

Reclamation

- Conservation & Reclamation plan submitted annually

SUNCOR ENERGY

Future Plans

Dover Facility

- Expected that it will remain available to support test facility for in-situ recovery technologies
- SAGD wells are to be retained for use in testing new technologies
- Decommissioning of some surface facilities is under review
- Use of portions of the facility site to support MacKay River development is also under review

Well Abandonment & Compliance Programs

- PC-07 and PC-14 wells were re-entered and abandoned in December 2010 to current ERCB Directive 20 guidelines
- Dover / MacKay River Directive 13 Compliance Program has brought 358 of 378 wells into compliance
- Remaining 20 to be brought into compliance in 2012

SUNCOR ENERGY

2011/2012 Applications

Project	Submission	Scope
MR2 Pad Development Project	July 29, 2011	Expansion of MacKay River Project into areas previously included in Dover PDA plus additional areas for the development of pads and facilities to support production at MacKay River 2 (formerly MRE).
BEST Field Pilot Project	August 9, 2011	Update to Application submitted October 24, 2011. Pilot is a field test of a solvent based recovery process.
Dormant Well Test	December 2011	Proposed application to produce a dormant well pair. The intent is to study performance characteristics of a collapsed steam chamber.
Other technology test programs	TBD	Suncor continues to review and develop proposals for other test programs of in-situ technologies.


SUNCOR
ENERGY