

2017 AAPCA Best Practice



Title V Engineer's Notebook

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Title V Program Manager

Do you face these problems?

- ◆ Inconsistent organization of voluminous information
- ◆ Erratic documentation of decisions
- ◆ Turnover/loss of knowledge
- ◆ Rigorous and active construction permitting
- ◆ Manager/peer reviews take too long
- ◆ Renewals inefficient due to rework
- ◆ Facility history missing

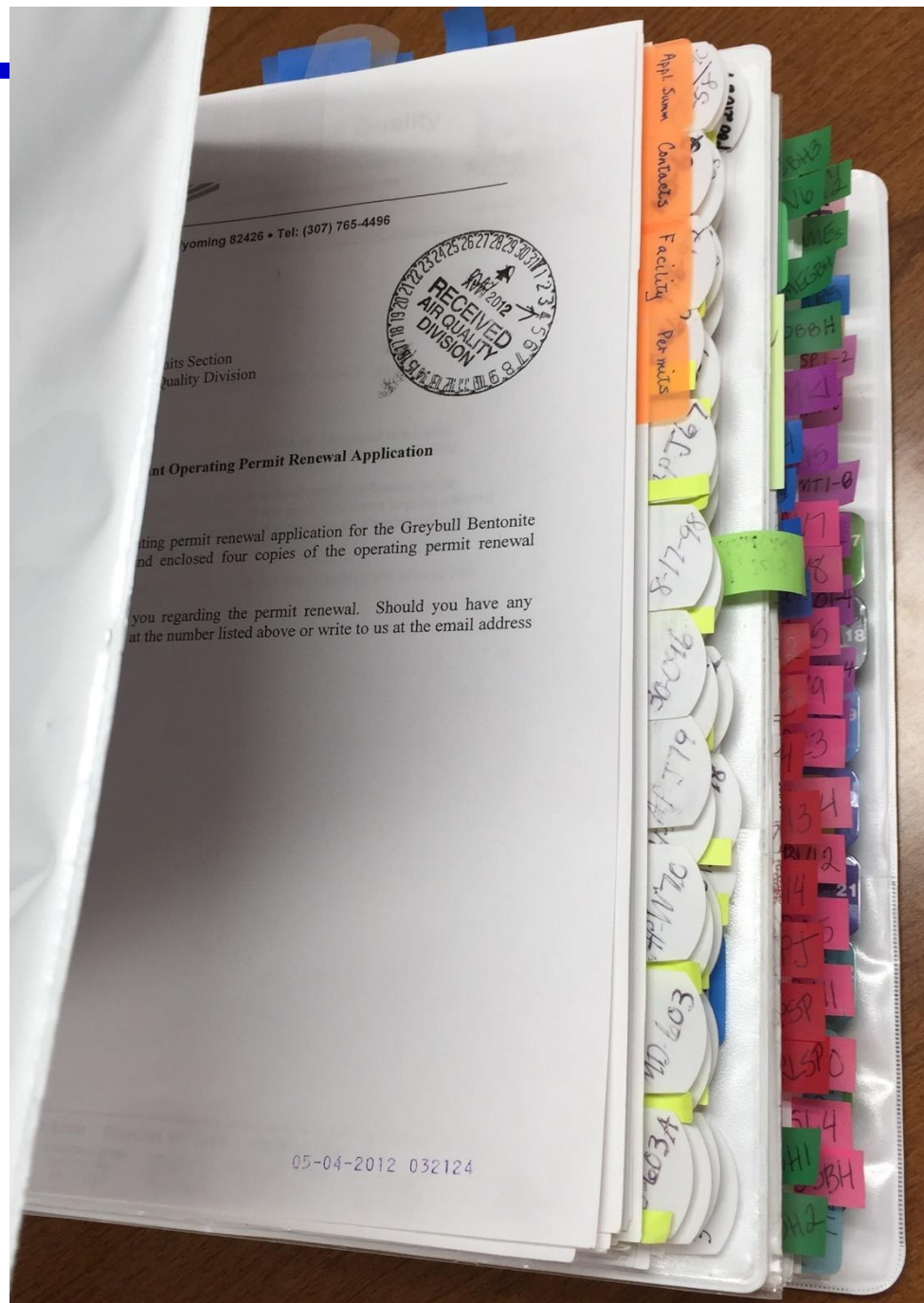
Wyoming's Solution: The Engineer's Notebook

Brainchild of Maggie Endres

- ◆ Consistent organization
- ◆ Promotes thorough and accurate permits
- ◆ Eliminates redundant research
- ◆ Documents full background of all decisions
- ◆ Anyone familiar with protocol can find information quickly

The Notebook (con't)

- ◆ Chain-of-custody tracking of all applicable requirements
- ◆ Memorializes relevant notes of every permit writer who's touched the facility
- ◆ Promotes continuity
- ◆ Streamline manager/peer review and renewals
- ◆ Designed to evolve over time



Chain-of-Custody Tracking

Source:
#1 (2) 60-24 disintegrators/crushers baghouse
#2 (2) rotary dryers, (3) Raymond roller mills (ESP repair/replace 75-76)
#3 tank vents, loadout (old mill Dracoo) baghouse
#4 dryer routed to baghouse #2, under MD-658. ESP replaced with baghouses, under MD-12008
Regis 770 jet flow packer (old warehouse packer) baghouse
invading? storage coal baghouse
Billions impact mill baghouses
24 disintegrator (crusher), Even Flow feeder hopper, baghouse

August 18, 1975
rins, Manager
Environmental Control
ils
77005

Permit No. CT-16
archive box 147/98

of Air Quality of the Wyoming Department of Environmental
mpleted final review of Dresser Minerals' application to
w bentonite facility in Big Horn County, Wyoming. Fol-
lency's tentative approval of the request as published
and in accordance with Section 21 (k)(1) of the Wyoming
standards and Regulations, the public was afforded a 30-
which to submit comments concerning the proposed new
ments have been received. Therefore, on the basis of
n provided to us, approval to construct a new bentonite
g Horn County, Wyoming, as described in the application
ted.

ed that this approval does not relieve you of your obli-
with all applicable local, county, state and federal
ulations or ordinances. Special attention must be given
of the Wyoming Air Quality Standards and Regulations.
requires that a permit to operate be obtained after a
up period, and Section 21(1) requires that performance
cted within 90 days after initial start-up.

f further assistance to you, please feel free to contact

Wood
Robert E. Smdin
Director
Dept. of Environmental Quality

CT-16
OP-29
MD-21
CT-354
OP-126
CT-759
30-124
MD-599
44-991
MD-658
52762
34-24

Western Gas Resources, Inc.
Air Quality Permit MD-1133
Page 3

10. That emissions from unit E19 shall be limited to the following:

Source	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	PM _{10-2.5}
Waukesha F3524GSI	1.0	1.9	8.1	2.0	3.7	16.2

11. That emissions from the engine re-builder (A16) shall be limited to the following:

Source	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	PM _{10-2.5}
0.04	1.2	5.3	0.08	2.4	10.5	

12. That the engine configuration for the Little Thunder Stratus Compressor Station shall be limited to nineteen (19) engines consisting of the following:

E1-R6: (5) Waukesha L7044GSI engines equipped with an AFRC and a NSCR catalyst.

E7-R10: (3) Caterpillar 3308TA engines equipped with an AFRC and a NSCR catalyst.

E11-E13: (3) Waukesha L7044GSI engines equipped with an AFRC and a NSCR catalyst.

E14-E19: (3) Waukesha F3524GSI engines equipped with an AFRC and a NSCR catalyst.

13. That annually, or as otherwise specified by the Administrator, the engine (E19) shall be tested to verify compliance with the NO_x and CO limits set forth in this permit. The first annual test is required the following calendar year after completion of the initial performance test. Testing for NO_x and CO shall be conducted in accordance with EPA reference methods or the State of Wyoming's Portable Analyzer Protocol. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. Results of the tests shall be submitted to this Division within 30 days of completing the tests.

14. That Western Gas Resources, Inc. shall use the following monitoring and maintenance requirements for engines E1-E19 equipped with a NSCR catalyst:

Operate and maintain the engine, air pollution control equipment, and monitoring equipment according to manufacturer's instructions at all times, including startup, shutdown, and malfunction.

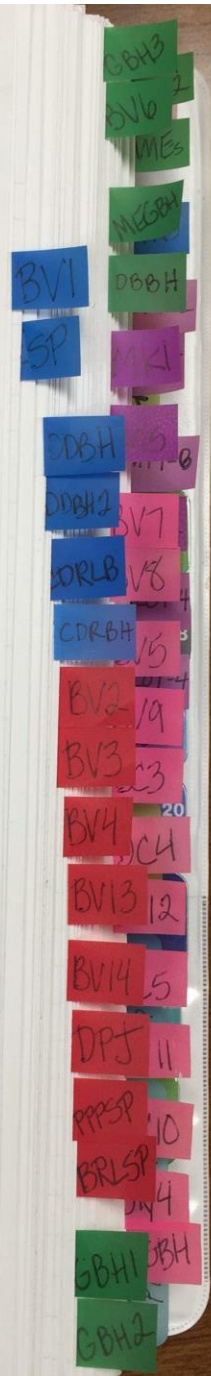
Install a thermocouple to measure the inlet catalyst temperature.

a. The inlet temperature shall be recorded at least monthly. If the temperature is outside of the range listed below, corrective action shall be taken.

NSCR Catalyst: 750 °F to 1250 °F

Emission Units

Key	
D Process	Page
r - ESP	B-1
	B-5
	B-9
d baghouse	B-13
	B-17
	B-173R
k Process	
	B-21
	B-25
	B-29
	B-33
	B-37
	B-41
	B-45
ular Truck Bulk Loadout	B-49
ar Process	
	B-53
	B-57
	B-61
	B-65
	B-69R
	B-73R
re-Gel Process)	
	B-77
	B-81
Saramix Process)	
	B-85
	B-89
	B-93
	B-97
	B-101
	B-105
	B-109
	B-113
	B-117
	B-121
	B-125
stem	
	B-129
ver Units	
	B-133
sel Engines	B-137
I Equipment	
	B-141
urces	
	B-145R
	B-149
	B-153R
	B-157
	B-161
	B-165
(Contingency)	B-171



Applicable Requirement Tracking

FMC - Granger Soda Ash

3-2-083

UIN-15 #2 Coal Fired Boiler

8A-EE (7/19/74): SO₂ scrubber

✓ CT-355 (1/27/81): PM, ~~SO₂~~, ~~NO_x~~, COM_s?, CEM_s?, subpart D

✓ MD-69 (5/5/87): PM, ~~SO₂~~, ~~NO_x~~

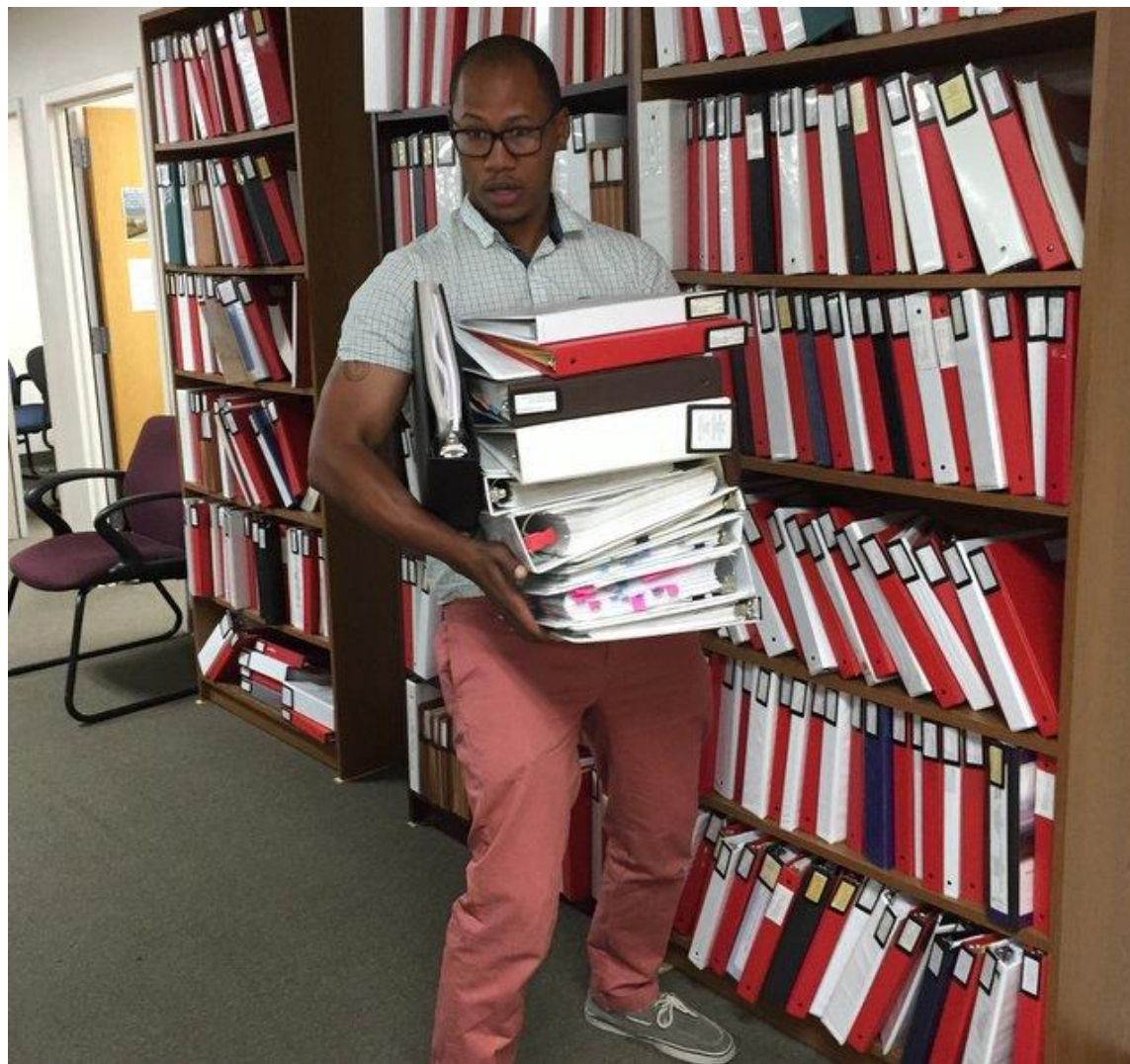
✓ OP-222 (9/30/91): PM, SO₂, NO_x

MD-12487 (6/12/13): Performentest, NO_x, SO₂, PM₁₀, PM_{2.5}, CEM, test, opac, subpart D

We love our notebooks...



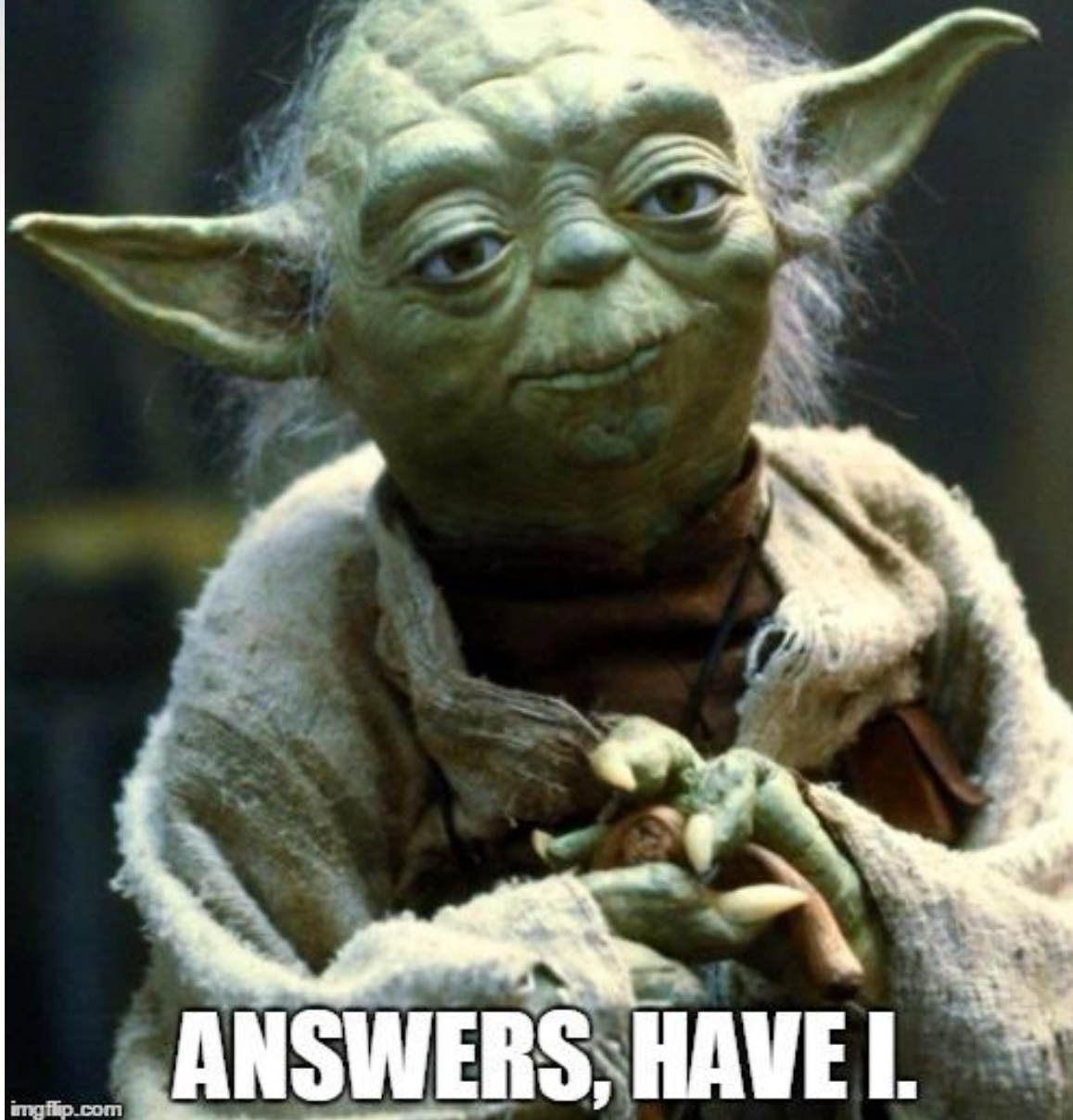
FIRE!



Lessons Learned

- ◆ Title V permit background work is tedious... do it once, do it right, make sure others can understand
- ◆ Human factor: note-taking, having everything at your fingertips (literally)
- ◆ Every element is there for a reason
- ◆ Does the change minimize rework, save time?
- ◆ Changes are reviewed and beta tested by all

QUESTIONS, HAVE YOU?



ANSWERS, HAVE I.

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