HOLISTIC ENVIRONMENTAL MANAGEMENT

Toyota’s Journey

AAPA Seminar
May 1, 2012

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WE’RE ALL IN THE SAME BARREL!

- Environmental Challenges
- Increasing Regulatory Requirements
- Local Community Concerns
- Business
- Ports
- Economical Conditions
- Public Image & Reputation
- Investors
- Politicians
WHAT WILL IT TAKE TO GET US OUT?

A “holistic” solution . . .

1. Comprehensive and enterprise-wide;
2. Imbedded in the business;
3. Clear vision, leadership & management commitment; and
4. Associate engagement.

One that is . . . “sustainable”.
HOW DO WE DO IT?

The Toyota Motor Sales approach:

1. **Foundation** - The Toyota Integrated Management System (TIMS)
   - Environmental plus hazmat and safety
   - Grounded in PDCA
   - ISO 14001, OHSAS 18001 certifiable
   - In “Toyota speak”
   - Embraces chronic malcontents (e.g., kaizen)
   - Common suite of IT support tools (Intelex)

2. **The Plan** - Toyota Environmental Action Plan
TMS EH&S – 2008: POLICIES, PROGRAMS & COMPLIANCE REVIEWS

• **Corporate EH&S policies**
  – Environmental – enterprise-wide policy
  – Hazmat, health & safety – no TMS corporate policies

• **Programs**
  – Environmental & hazmat – consistent program, but not enterprise-wide coverage
  – Health & safety – inconsistent content & coverage

• **Compliance Verification**
  – Environmental & hazmat – annual reviews at operational facilities, but not at all office facilities
  – Health & safety – periodic reviews at some facilities, but no standard protocols
TMS EH&S – 2008:
MANAGEMENT SYSTEMS & CORE PROGRAMS

- Toyota Logistics
  - Vehicle Delivery Centers
- Parts Distribution Centers
  - CA Parts Center
  - KY Parts Center
- TMS Headquarters
  - Toyota/Lexus Offices
  - Toyota Racing
  - AirFlite
- OHSAS 18001
  - Health & Safety
- ISO 14001
  - Environmental
- TMS DOT
  - Hazmat
- OSHA VPP
- TMC Program
TMS EH&S – 2008: ASSESSMENT

• Need for better governance, clear roles and responsibilities & accountability

• Need for centralized compliance (a “clear line of sight”)

• Need for consistent policies, management systems & programs, with facility-specific flexibility

• Compliance risks compounded by increasing regulatory requirements at the federal, state and local levels
COUNTERMEASURE & EH&S FUTURE STATE

• Develop and implement a TMS enterprise-wide, integrated environmental, hazmat & safety management system, including:
  – Formalized governance process
  – Management engagement
  – Centralized compliance responsibility
  – Standardized policies, processes, programs and training

• Develop and implement standardized IT tools to support the management system
WHAT DOES IT LOOK LIKE?

TOYOTA ENVIRONMENTAL, HAZMAT, & SAFETY INTEGRATED MANAGEMENT SYSTEM

STANDARDS & CORE PROCEDURES: What We’re Going to Do

PROGRAMS: How We’re Going to Do It

INTELEX: The Tool to Get It Done
WHAT DOES IT LOOK LIKE? Standards & Core Procedures

- **CP01** Resources, Roles, & Accountability
- **CP02** Management Review Committee
- **CP03** Communication, Participation, & Consultation
- **CP04** Resources, Roles, & Accountability
- **CP05** Hazards & Risks Assessment
- **CP06** Incident Investigation
- **CP07** Corrective & Preventative Action
- **CP08** Emergency Preparedness & Response
- **CP09** Operational Control
- **CP10** Training, Awareness, Competence, & Qualifications
- **CP11** Objectives, Targets, & Kaizens
- **CP12** Performance Measuring & Monitoring
- **CP13** Document Control
- **CP14** Records
- **CP15** Evaluation of EHS Performance
- **CP16** Internal Audit

1. **Mgmt Commitment**
2. **Assoc Involvement**
3. **EHS Assessment**
4. **Hazard Prevention & Control**
5. **Training**
6. **Key Performance Indicators**
7. **Document & Data Control**
8. **Mgmt System Evaluation**

**CP01**

**CP02**

**CP03**

**CP04**

**CP05**

**CP06**

**CP07**

**CP08**

**CP09**

**CP10**

**CP11**

**CP12**

**CP13**

**CP14**

**CP15**

**CP16**
GOVERNANCE & ROLES IMBEDDED IN TIMS

STANDARDS & CORE PROCEDURES: What We’re Going to Do

- EHS Executive Steering Committee
- EHS Review Panel
- TMS Corporate EHS
  - Logistics
  - Parts
  - Racing
  - Aircraft
  - HQ, Sales, Other
WHAT DOES IT LOOK LIKE? PROGRAMS
WHAT DOES IT LOOK LIKE? INTELEX

1. Current Modules
   • 6 modules, launched in 3 Phases

2. Future Modules
   • Will evaluate replacement of other systems
   • Image is to become “one-stop shop”
ELEMENTS OF

 Enterprise-wide program
 Formalized governance
 Clear & transparent roles & responsibilities
 Clear “line of sight” on compliance
 Standardization, with customization
 Accountability & stewardship
 Platform for compliance & sharing BMP’s
PART 2 TO “HOW DO WE DO IT” – THE PLAN

The Toyota Motor Sales approach:

1. **Foundation** - The Toyota Integrated Management System (TIMS) and Intelex

2. **The Plan** - Toyota Environmental Action Plan
   - Vision – from the top
   - Process - PDCA and “Hoshin Kanri”
   - Accountability and report results
ENVIRONMENTAL ACTION PLAN STRUCTURE

- Toyota’s Guiding Principles
- Global Earth Charter Policies & Action Guidelines
- Toyota Global 5-Year EAP
- Global Environmental Report
- North American Environmental Report
- TMS Environmental Action Plan
NORTH AMERICA & TMS: TARGET SETTING

TMC JAPAN

North American Environmental

TMS Chief Environmental Officer

Corporate Responsibility

Environmental, Hazmat & Safety

• Measureable targets
• Ownership & accountability

Compliance Working Group

Resource Management Working Group

Business Partner Working Group

Communications Working Group

EAP Policies & Priorities

1. Energy & Climate Change
2. Recycling & Reduce Resources
3. Substances of Concern
4. Air Quality
5. Environmental Management
6. Cooperation with Society
THE PLANNING PROCESS: HOSHIN KANRI + PDCA

Earth Charter Policy
Earth Charter Action Guide
TMS Policy
5-Yr Action Plan (EAP)
1-Yr. EAP
Site Target
Kaizen Project
Kaizen Results
Site Performance
1-Yr. EAP Results
5-Yr. EAP Results
Review TMS Progress
Review Global Progress

Plan

Do

Check

Act
THE PROCESS APPLIED

Policy – Harmonious Growth
Produce with zero waste
Minimize waste - recycle
TLS – 90% rate (5-yr.)
Maintain 90% (1-yr.)
94% site target
Recycle plastic film
13K lbs. recycled
Site rate of 93.8%
TLS rate – 90.2%
TMS rate – 90.9%
TMS at zero waste?
Repeat cycle & kaizen

Plan
Do
Check
Act
NORTH AMERICA & TMS: RESULTS REPORTING

CORE ELEMENT OF TOYOTA’S EAP: BEYOND COMPLIANCE

• EH&S compliance is the baseline – “zero violations”
• How do you go beyond “zero violations” compliance to pursue “zero impact” on the environment . . . especially in the current economic environment?

“Environmental Pragmatism”

“Short-term small” + “long-term large” strategy
“SHORT-TERM SMALL”

- Identify small investments and process changes that have short-term ROI and achieve environmental goals
- String them together to maximize return

**TMS Parts & Vehicle Logistics**
- Driver incentive
- Idling reduction
- Speed governors
- Aerodynamic equipment
- Route kaizens

**FY11 Annual Savings**
**Fuel & Emissions**
- 158,700 gal
- 3.64M lbs. CO₂
- + $600K
“LONG-TERM LARGE”

- Patient investment – facilities, equipment and process changes
- Longer-term plans and expectations
- No instant ROI – but greater long-term return
“LONG-TERM LARGE” - NAPCC SOLAR PROJECT
NAPCC SOLAR PROJECT BENEFITS

• 2.3 megawatt solar roof array – second largest in North America
• Generates 58% of NAPCC electricity requirements

Financial Cost/Benefit
❖ No upfront capital costs
❖ Prevents 2.4M lbs. CO2 annually
❖ $360K/yr. - utility cost savings
“LONG-TERM LARGE” – TMS STATIONARY FUEL CELL

- Ballard 1 MW Proton Exchange Membrane (PEM) hydrogen fuel cell
- Use during peak demand period

**Financial Cost/Benefit**
- $5.5M project
- Majority funding CA Self-Generation Incentive
- 1.9-year ROI
- $130K/yr. – utility cost savings
HOW DO WE ADDRESS TODAY’S ENVIRONMENTAL CHALLENGES & “GO BEYOND”?  

THE SOLUTION IS “MISSION POSSIBLE”

A program that is “holistic” and “sustainable” with a . . .

1. **Foundation** – environmental management system; and

2. **Plan** – environmental action plan . . .

That are imbedded in the business!