

**To:** Hupp, Sydney[hupp.sydney@epa.gov]  
**Cc:** Willis, Sharnett[Willis.Sharnett@epa.gov]; Dickerson, Aaron[dickerson.aaron@epa.gov]  
**From:** Robert Kroutil  
**Sent:** Mon 5/22/2017 1:42:15 PM  
**Subject:** Re: scheduling issue  
Oklahoma ASPECT Program.pdf

Sydney,

I am sending an attachment for the item that members of the Oklahoma emergency response team would like to urgently discuss with Mr. Jackson. This item shown in the attachment and concerns the only 24/7 airborne chemical and radiological emergency platform operating within the United States today. This asset was moved to the U.S. EPA during the 9/11 emergency by the Bush Administration. At that time, EPA was the only Federal organization with the legal authority to conduct these types of emergency response missions. However, this legal issues has now changed and the asset was never returned to the originating agency and continued operating within the U.S. EPA since 2001. We would like to discuss the issue of how to maintain this critical national capability while still providing the EPA needed immediate access to the platform. Our goal is to reduce costs to the EPA while still providing the country this single critical national emergency response capability.

Best Regards,  
Robert Kroutil, Ph.D.  
Kalman and Company, Inc.  
Yukon, Oklahoma  
ph: 757-419-9386

On Mon, May 15, 2017 at 10:13 AM, Hupp, Sydney <[hupp.sydney@epa.gov](mailto:hupp.sydney@epa.gov)> wrote:

Got it. Looping in Sharnett and Aaron who handle Mr. Jackson's schedule.

I am also an Ok State grad! Go Pokes!

Thank you!

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**Sydney Hupp**

Executive Scheduler

Office of the Administrator

202.816.1659 (c)

**From:** Robert Kroutil [mailto:Personal Email/Ex. 6]  
**Sent:** Monday, May 15, 2017 11:22 AM  
**To:** Hupp, Sydney <[hupp.sydney@epa.gov](mailto:hupp.sydney@epa.gov)>  
**Subject:** Re: scheduling issue

Hello Sydney !

Yes, I was wanting to set up a meeting with Mr. Ryan Jackson to discuss national emergency response issues that impact the U.S. EPA. I would like to bring two colleagues from Oklahoma that are experts about the EPA emergency response program to the meeting. We would like to propose a requested transition of an EPA asset back from where it originated which is the Department of Defense. We expect this will reduce costs for the EPA.

At any point, we would like to discuss a proposal to reduce the current costs of operation to the EPA.

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I am originally from Yukon, Oklahoma and a Ph.D. graduate in physical chemistry from Oklahoma State University. I am one of the leading scientists in the country in the technical area of chemical and radiological emergency response technology with over 100 scientific publications and scientific lectures at numerous invited national and international scientific conferences. I have attached a short bio of my experience and a photo.

We would only need about 30-45 minutes with Mr. Jackson to discuss the issues related to the EPA and emergency response. We would be pleased to answer any questions that Mr. Jackson would want to ask about this technology area and the state of the Nation's chemical and radiological emergency response capabilities.

Thanks so much !

Best Regards,

Robert Kroutil

Kalman and Company, Inc.

Yukon, Oklahoma

ph: 757-419-9386

On Mon, May 15, 2017 at 8:39 AM, Hupp, Sydney <[hupp.sydney@epa.gov](mailto:hupp.sydney@epa.gov)> wrote:

Good afternoon Dr. Kroutil,

Thank you for reaching out! Were you wanting to set up a meeting?

Thanks!

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**Sydney Hupp**

Executive Scheduler

Office of the Administrator

202.816.1659 (c)

**From:** Robert Kroutil [mailto:[Personal Email/Ex. 6](mailto:Personal Email/Ex. 6)]  
**Sent:** Monday, May 15, 2017 10:20 AM  
**To:** Hupp, Sydney <[hupp.sydney@epa.gov](mailto:hupp.sydney@epa.gov)>  
**Subject:** scheduling issue

Would it be possible for you to contact me regarding a scheduling issue ?

I am a Ph.D. graduate from Oklahoma State University.

My phone number is [Personal Phone/Ex. 6](tel:Personal Phone/Ex. 6)

Best Regards,

Robert Kroutil

Kalman and Company, Inc.

Yukon, Oklahoma

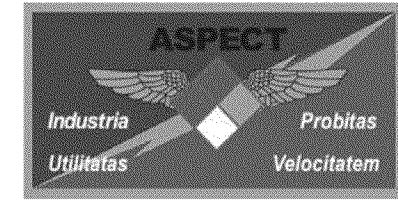
# ASPECT Program

Airborne Spectral Photometric Environmental Collection Technology

## NATION'S ONLY

### Remote-Sensing & Imagery for Emergency Response

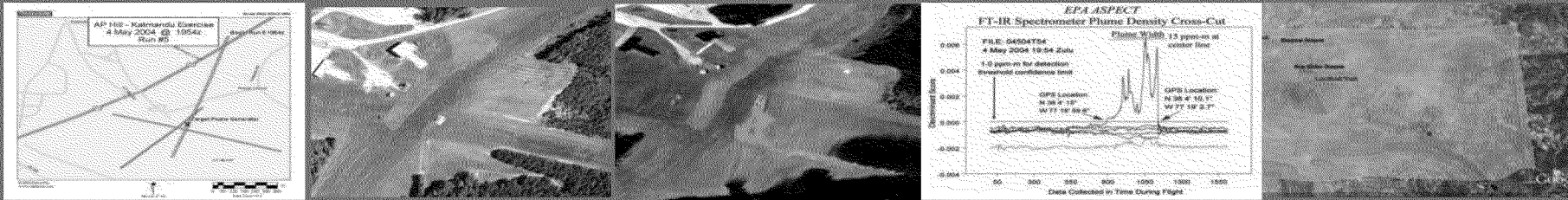
### Chemical, Radiological & Situational Awareness



# ASPECT - Operational Concept

- Provide a readiness level on a 24/7 basis
- Provide a simple, one phone call activation of the aircraft
- Wheels up in under 1 hour from the time of activation
- Once onsite and data is collected it takes about....

~ 5 minutes to process and turn around data to first responders



- Deployment Simplified:
  - Once on-scene collect chemical, radiological, or situational data (imagery) using established collection procedures
  - Process all data within the aircraft using tested automated algorithms
  - Extract the near real time data from the aircraft using a broadband satellite system and rapidly QA/QC the data by a dedicated scientific mission control team
  - Provide the qualified data to the first responder enabling them to make informed decisions in minimal time

# Deployments & Range

- ❑ 167 deployments
- ❑ ~510 Sorties (flights)
- ❑ 67 Emergency Responses
- ❑ 24+ Scientific Studies
- ❑ Numerous FTXs
- ❑ SEAR & NSSEs
- ❑ Utilized by all EPA Regions
- ❑ Federal, HRF, CST
- ❑ International Notoriety
- ❑ Terabytes of Data

## Estimates Include:

1. 1 hour prep
2. Refueling stop
3. >1 hour data collection



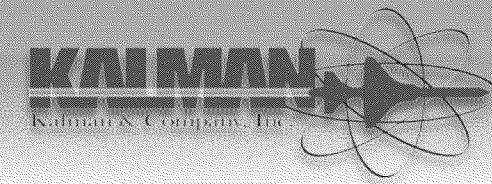
**Communications:**

1. Real-time status
2. Flight parameters developed & uploaded while in-flight
3. Preliminary products in-flight

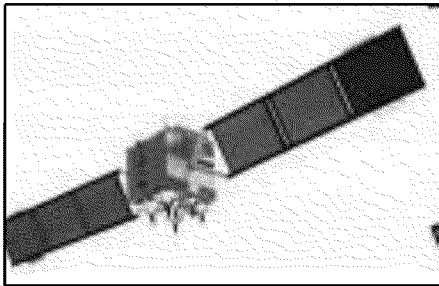
**Safety/Regulation:**

1. Fully FAA Certified Aircraft and Pilots
2. FAR Part 91
3. FAR Part 135

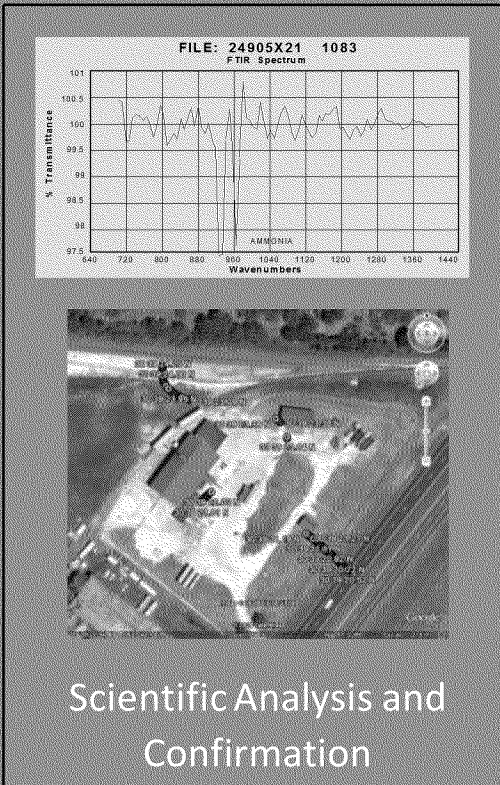
# ASPECT – Data Analysis & Dissemination



***\*Detect – QC – Disseminate in 3 - 5 minutes\****



Data package QA/QC by Mission Control Team



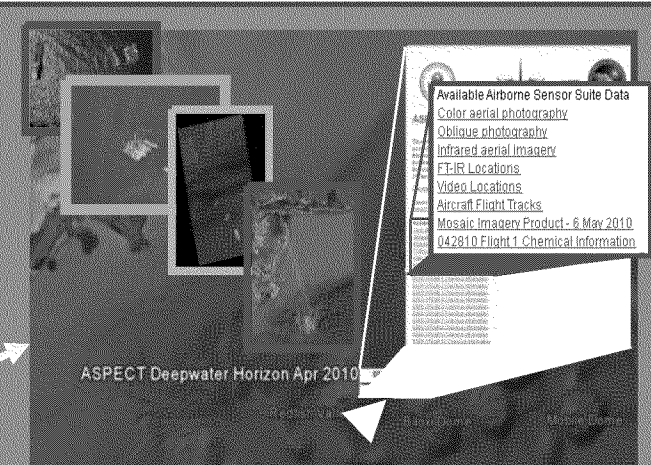
Compressed data package sent via satellite



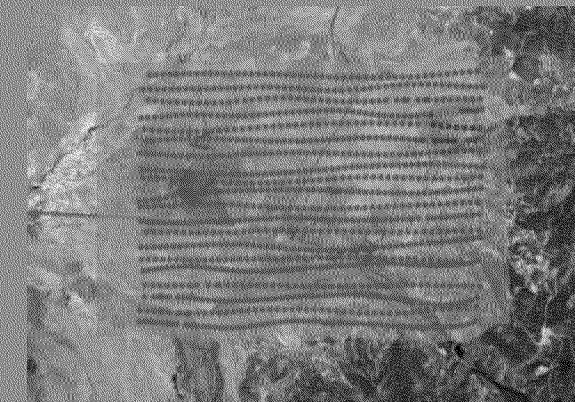
Automated airborne processing and packaging



Chem/Rad/Situational data collected



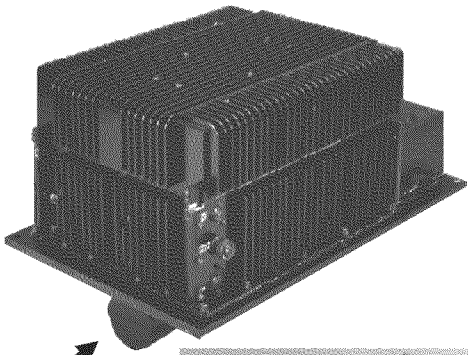
Data dissemination using Google Earth/ESRI



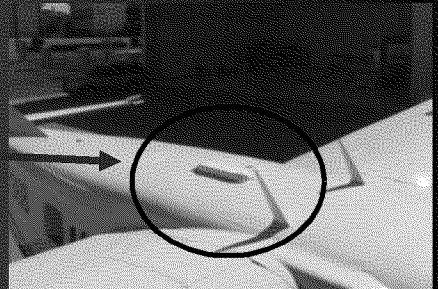
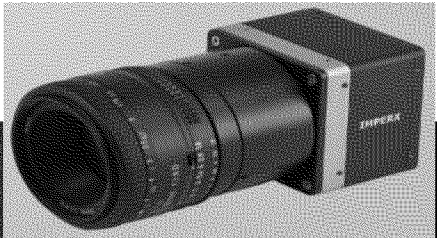
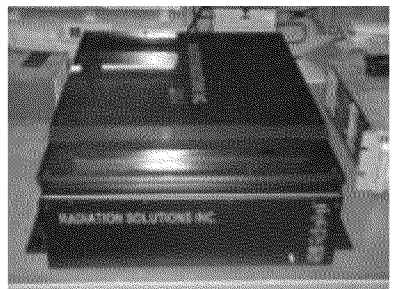
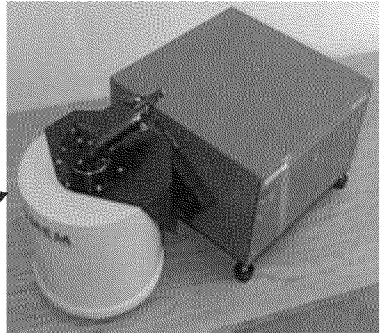
# ASPECT - CURRENT SYSTEMS

## ASPECT Primary Sensors/Systems:

- An Infrared Line Scanner\* to image the plume
- A High Speed Infrared Spectrometer\* to identify and quantify the composition of the plume
- Gamma-Ray Spectrometer Packs for Radiological Detection (NaI and LaBr) and two  $\text{BF}_3$  Neutron Detector arrays
- High Resolution Digital Aerial Cameras\* with ability to rectify for inclusion into GIS
- Broadband Satellite Data System (SatCom)
- \*29 MP Mapping and 12.5 MP Nikon DX2 DSLR

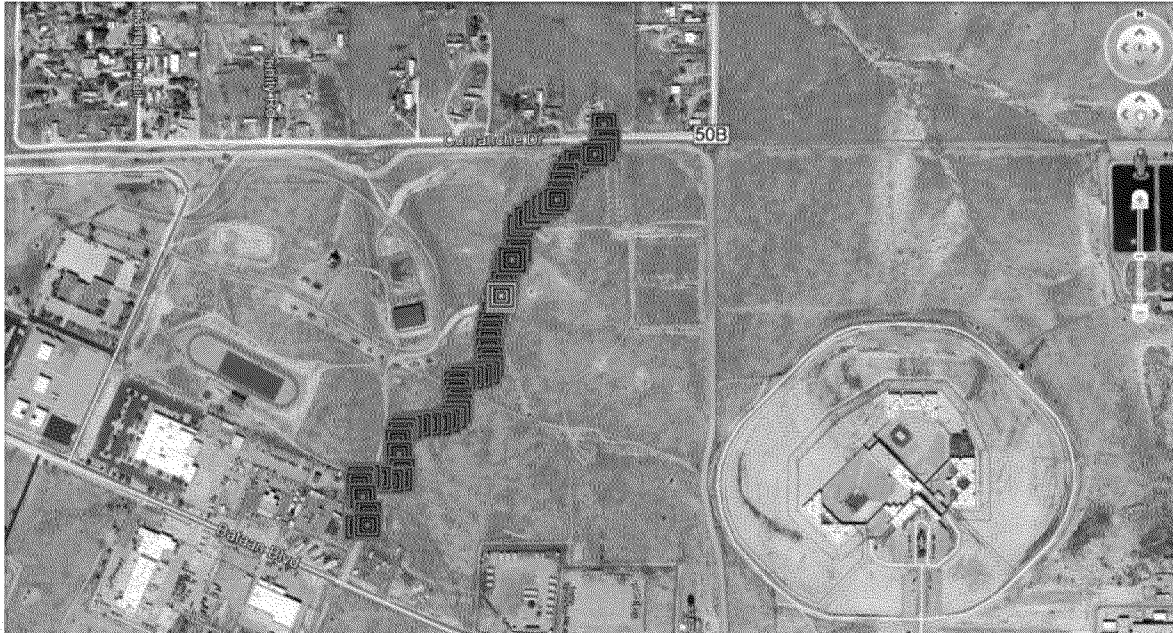


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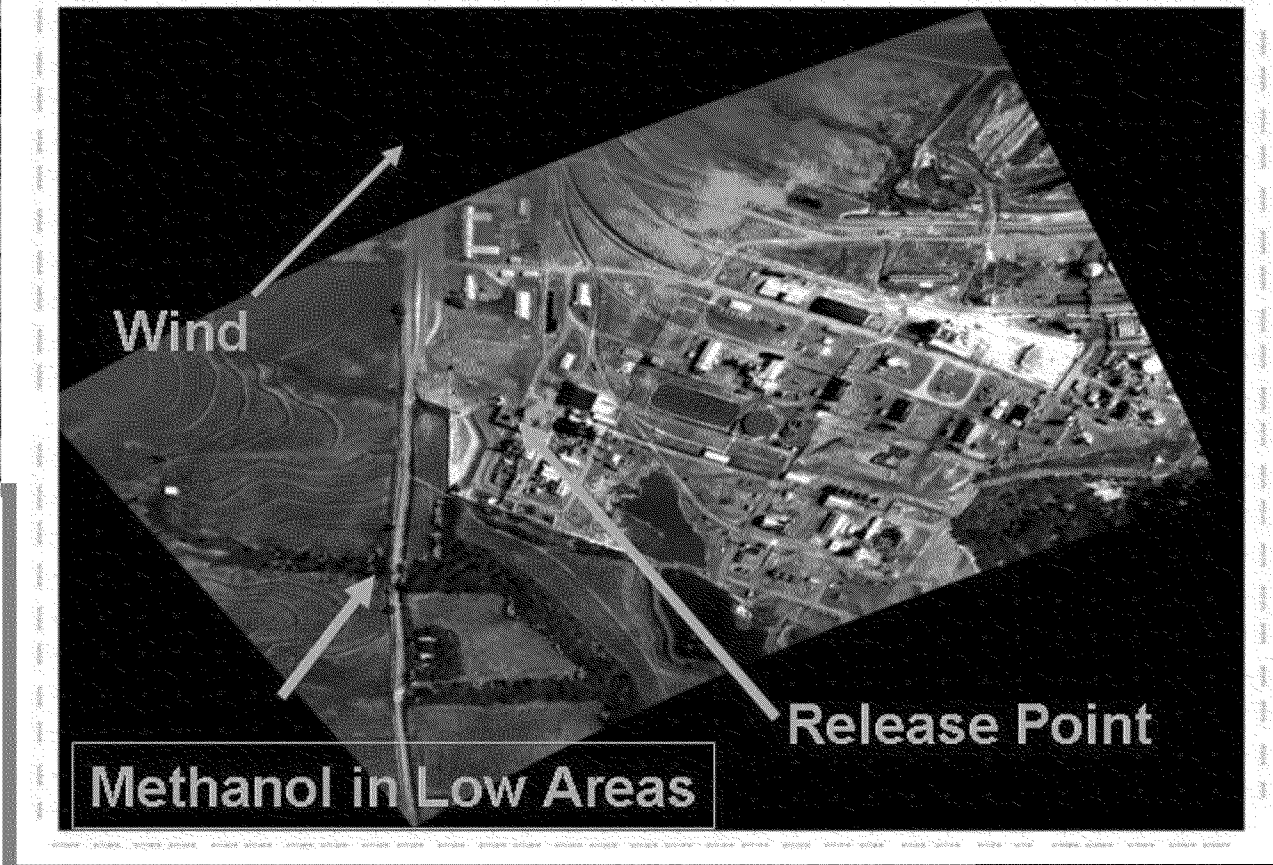
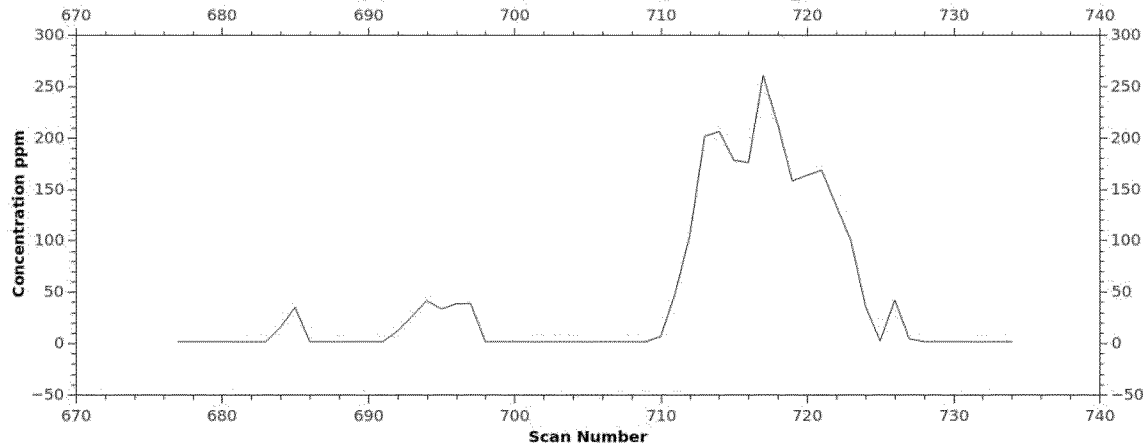


# Chemical Detection Product

## Ammonia Detection & IR Image of an Industrial Methanol Plume



Ammonia Concentration for File H08H1419\_55A



# Summary



- ASPECT has capabilities applicable to a wide range needs. 167 Deployments !
- **Nation's only system** and operates at a fraction of the cost of any other programs offering far less
- Produces quality vetted data allowing boots on the ground to make actionable decisions
- Small footprint and self sufficient

