Event/	Educated guess	Somewhat confident	Very Confident
Confidence	(+)	(+++)	(++++)
Level 1. Asian Dust	Case 1: Asian Dust Score Available	Case 1: Asian dust score available	Case 1: Asian dust score available
1. Asian Dust	for site	for site	for site
	{Asian Dust score > 1500 at	{(Asian Dust Score > 1500 at	{(Asian Dust Score > 1500 at
	multiple sites }	multiple sites)	multiple sites
	OR	AND	AND
	{(Asian dust score >1500 at one	(back trajectories suggest air mass	(back trajectories suggest air mass
	site)	originated over Pacific Ocean)}	originated over Pacific Ocean)
	AND	originated over 1 active Ocean)}	AND
	(back trajectories suggest air mass		(satellite or models indicate large
	originated over Pacific Ocean)		scale transport of dust from Asia)
	Case 2: Asian Dust Score not <u>available for site</u> {(Asian dust scores at multiple sites surrounding the site of interest >1500) AND (back trajectories suggest air mass originated over Pacific Ocean)}	<u>Case 2: Asian Dust Score not</u> <u>available for site</u> {(Asian dust is primary event causing dust at multiple sites surrounding the site of interest with a confidence of +++++)	
2. Windblown Dust	Case 1: Meteorological data available and MLRA showed significant relationship between high	Case 1: Meteorological data available and MLRA showed significant relationship between high	<u>Case 1: Meteorological data</u> <u>available and MLRA showed</u> <u>significant relationship between hi</u>
	wind conditions and dust measured	wind conditions and dust measured	wind conditions and dust measure

Table 9: The criteria used to determine the category and level of confidence for each worst dust day

{(LWD to total measured dust ratio {(LWD to Total measured dust ratio {(LWD to total measured dust ratio

>0)	>0.25)	> 0.5)
AND	AND	AND
(Back trajectories show high wind	(back trajectories show high (>20	(back trajectories show high (>20
speed (>20 mph) at or near the site	mph) wind speed at or near the site	mph) wind speed at or near the site
over terrain with moderate or greater	over terrain with moderate or greater	over terrain with moderate or greate
wind erodibility)}	wind erodibility)}	wind erodibility)}
while croatenity)j	while croatonity)j	while croatonicy/j
Case 2: Meteorological data not	Case 2: Meteorological data not	
available for day of interest but	available for day of interest but	
MLRA showed significant	MLRA showed significant	
relationship between high wind	relationship between high wind	
conditions and dust measured at site	conditions and dust measured at site	
of interest	of interest	
{(Back trajectories show high wind	{(Back trajectories show high wind	
speed (>20 mph) at the site over	speed (>20 mph) at the site over	
terrain with moderate or greater	terrain with moderate or greater	
wind erodibility)	wind erodibility)	
AND	AND	
(Worst dust days at one or more sites	(Worst dust days at one or more sites	
near the site of interest are caused by	near the site of interest are caused by	
windblown emission with	windblown emission with	
confidence of "+++" or higher)}	confidence of "+++++" or higher)}	

3. Transport from windblown dust sources upwind	Case 1: <u>Meteorological data</u> <u>available</u> <u>AND</u> <u>No evidence of local windblown</u> <u>dust (LWD=0 or not calculated)</u> (back trajectory for site shows up to three hours of high winds (>20 mph)	Case 1: <u>Meteorological data</u> <u>available</u> <u>AND</u> <u>No evidence of local windblown</u> <u>dust (LWD=0 or not calculated)</u> (back trajectory for site shows up to 8 hours of high winds (>20 mph)	Case 1: <u>Meteorological data</u> <u>available</u> <u>AND</u> <u>No evidence of local windblown</u> <u>dust (LWD=0 or not calculated)</u> (back trajectory for site shows up to 15 hours of high winds (>20 mph)
	three hours of high winds (>20 mph)	8 hours of high winds (>20 mph)	15 nours of high winds (>20 mph)

	over terrain with moderate or greater wind erodibility within one day of transport of the site)} OR (back trajectories for multiple sites shows up to 3 hours of high winds (>20 mph) over terrain with moderate or greater wind erodibility within one day of transport of the site)}	over terrain with moderate or greater wind erodibility within one day of transport of the site)} OR (back trajectories for multiple sites shows up to 3 hours of high winds (>20 mph) over terrain with moderate or greater wind erodibility within one day of transport of the site)}	over terrain with moderate or greater wind erodibility within one day of transport of the site)}
	Case 2: Meteorological data not	Case 2: Meteorological data not	Case 2: Meteorological data not
	available for day of interest but	available for day of interest but	available for day of interest but
	MLRA showed significant	MLRA showed significant	MLRA showed significant
	relationship between high wind	relationship between high wind	relationship between high wind
	conditions and dust measured at site	conditions and dust measured at site	conditions and dust measured at site
	of interest	<u>of interest</u>	<u>of interest</u>
	{(back trajectory for site shows up to	{(back trajectory for site shows up to	{(back trajectory for site shows up to
	three hours of high winds (>20 mph)	eight hours of high winds (>20 mph)	15 hours of high winds (>20 mph)
	over terrain with moderate or greater	over terrain with moderate or greater	over terrain with moderate or greater
	wind erodibility within one day of	wind erodibility within one day of	wind erodibility within one day of
	transport of the site) but absence of	transport of the site) but absence of	transport of the site) but absence of
	high winds over the site itself}	high winds over the site itself}	high winds over the site itself}
2 - 3a.	{(Same as for 2 or 3.)	{(Same as for 2 or 3.)	{(Same as for 2 or 3.)
Windblown	AND	AND	AND
Dust: Regional Event	{(back trajectories for multiple sites indicate a common regional flow	{(back trajectories for multiple sites indicate a common regional flow	{(back trajectories for multiple sites indicate a common regional flow
	pattern)}	pattern)}	pattern)}