

Air Emissions Questions

Health:

- 1) As the park is closed, due to toxic air emissions from the cover-up of the Tar Ponds, how will you stop the toxic air from migrating across the street and compromising the health of the residents?

A: Park construction was delayed because the site was designated as unused property in the project's air modeling program. If air emissions approach unacceptable levels, work stops and mitigative measures are taken to ensure the safety of workers, residents and the environment is maintained.

- 2) During the construction of the temporary, slag roads around the ponds, no consideration was taken in account for the citizens of the surrounding area. For example, vehicles on site were emitting very loud noises at six AM every day, preventing people from sleeping. This activity was, even, done on Saturdays. Most of the trucks, transporting the slag, were not covered and, even those that were covered, were done in a manner which did not stop the dust from blowing on the residents. Also, there was no watering of the roads on some days and minimum, ineffectual watering on other days as documented by the numerous photographs taken during this phase. Are we to expect this type of behaviour for the entire extent of the project?

A: In addition to the dust control requirements of each contractor, the Sydney Tar Ponds Agency is obtaining a full-time watering truck and driver for the remainder of the project. As well, the Agency is in the process of selecting a material to place on the project's construction access roads to minimize dust levels. With respect to noise, part of the contractor's responsibility is to ensure noise levels generated on site are within Environmental Approval criteria for their project. In saying that, these levels are based on the typical Municipal/Provincial noise guidelines set forth by the governing bodies. The Agency randomly audits these measurements and has quality assurance monitoring take place to ensure the integrity of the monitoring program.

- 3) Are you aware of the impact from this behaviour (noted in the above question) on the psychological and physical health of the people, especially the children?

A: We understand that area residents have concerns regarding the cleanup and are committed to implementing the project in a manner that is protective of human health and the environment and in full compliance with the controls and protocols established by environmental regulatory authorities. These controls and protocols are among the most stringent ever applied to a remediation project in Canada.

- 4) Are the suspended particles in the air toxic?

A: Our continuous air monitoring program results show that the air is typical of an urban area.

- 5) Does normal air quality mean that we have just as much normal contamination as Toronto? Where is the control city or town for us?

A: The results of air monitoring samples collected as part of our program are compared to air criteria limits that are deemed safe for the public. There is no “control” city used as a comparison to our results.

- 6) Will the two schools (Harbourside & Etoile de l’Acadie) and Louisa Playground be closed when the air monitor indicates a high level of contamination or will they be closed indefinitely before October 2009?

A: Both the school and playground were part of the air modeling program created for the project, a program reviewed, approved and implemented with care. When there are air exceedances, work is stopped at the site and mitigative measures are taken well before emissions reach an unsafe levels for workers, residents, students and the environment.

Safety:

- 7) If the air emissions are toxic, how will you get the people out of harm’s way?

A: In the project’s ambient air monitoring program (available at www.tarpondscleanup.ca), there are a host of mitigative measures contractors can use to control emissions before they reach unacceptable levels. These measures can include odour suppressant foam, watering material, or work stoppages if air emissions reach specific action levels. These mitigative measures are taken before the community, workers or the environment is at risk. These measures are tied to project activities so that contractors work within the project’s permitting requirements. Because of the stringent air quality requirements of the project, there is no need to move nearby residents during our construction activities. In the unlikely event that air emissions reach an unsafe level, the CBRM’s Emergency Responders, who are highly trained in responding to a wide range of hazardous material emergencies, will be called into action and will evacuate residents.

- 8) Will there be a report of all monitored chemicals produced or otherwise present that may be such a hazard to all Sydney residents?

A: There is a report prepared on a monthly basis and is available for public review at www.tarpondscleanup.ca. As well, annual reports are also prepared and uploaded to the Agency’s website.

- 9) How is the Sydney Tar Pond Agency going to, immediately, notify the residents of Sydney if the toxic air emissions, from the cover-up site, reach unacceptable levels?

A: As in the past, the Agency contacts media to alert the community when work is shut down for the day due to real-time air monitoring exceedances. To clarify, work is stopped and mitigative measures are taken before air emissions reach unsafe levels.

- 10) When will the residents be given a written health and safety program which includes an evacuation procedure?

A: The Agency will co-ordinate an evacuation briefing for the community if requested. In the meantime, the community can be assured that emergency responders within the Cape Breton Regional Municipality are trained to evacuate residents in times of emergency. In addition, the project has provided funding to train and provide equipment for the Cape Breton Regional Municipality HazMat team. The team is comprised of highly trained men and women who remain on call 24 hours a day, 365 days a year to respond to a wide range of hazardous material emergencies.

- 11) Is there any training of employees at the STPA to carry out the important task of looking after the community?

A: If the intent of the question is in regards to an emergency, emergency responders within the Cape Breton Regional Municipality are trained to evacuate residents in times of emergency. In addition, the project has provided funding to train and provide equipment for the Cape Breton Regional Municipality HazMat team. The team is comprised of men and women who remain on call 24 hours a day, 365 days a year to respond to a wide range of hazardous material emergencies.

- 12) Who does look after the community in times of emergency?

A: The Cape Breton Regional Municipality has trained and extremely capable emergency responders who are always available to the community in times of emergency.

- 13) Who do we contact if we smell toxic fumes?

A: If residents feel their life is in immediate danger, they should call 911. If a resident wants to file an odour complaint or to enquire about an odour, they can contact the Sydney Tar Ponds Agency, or Nova Scotia Environment.

- 14) Who is responsible for the correction of toxic hazards in the air?

A: Everyone working on the site is responsible when it comes to keeping the community safe. Although the Agency is ultimately responsible, each contractor has its own requirements when it comes to controlling air emissions and have committed to ensuring mitigative measures are taken when specific action levels are reached. These actions are taken before air emissions become unsafe for workers, residents, and the environment.

- 15) Why did the STPA not post signs on the park warning the public of toxic air emissions from their work being done on the Tar Ponds site?

A: If this is in reference to the proposed park by Wintering Harbours Neighbourhood Association, signs were not needed because the property was deemed unused land. If the property remains within its current designation, there is no need to post signs because the use of the property will not change. However, we can post construction signs on nearby fencing to alert the public that construction activities are underway. Please note that creating a green space immediately adjacent to construction activities would lower the action levels tied to project activities. These levels are

already considered conservative and protective of human health when all existing receptors are considered.

- 16) Would it be possible to place special canisters, containing alarms, higher up on a few homes along Intercolonial Street, so that if any PAH, PCB, or Voc levels are exceeded, at anytime during the work at the Tar Ponds, they will go off?

A: The Project's existing air monitoring program has been approved and meets all regulatory requirements. The program is already protective of human health and the environment and stipulates that action is taken before there is a risk to human health. The program is implemented by qualified technicians trained to accurately report air monitoring results to all project stakeholders. That said, the Agency will be adding a VOC (volatile organic compound) canister to the Ambient Air Monitoring Station located at Intercolonial Street.

- 17) When will the STPA be moving the residents of the immediate area out of harm's way, to protect the citizens' health from the toxic air emissions caused by the cover-up of the Tar Ponds?

A: The project plan underwent a complete Joint Review Panel Environmental Assessment that determined that the project can proceed without significant adverse environmental effects. Also, the panel did not conclude that residents are required to be relocated during project activities.

- 18) Do you think that you are in error by not testing the park/recreation lands in question for a potential receptor for contaminated air which would be detrimental to human health because of activities from the work done on the Tar Ponds?

A: The Air Quality Study undertaken as part of the Project Environmental Impact Statement indicated that the proposed park area, between the east side of Intercolonial St. and the south tar pond, could be impacted during some Project activities. For this reason, and the fact that the rail yard area is being used, the Project has asked that the development of a park/recreational area be delayed until activities conclude in the south tar pond. Protecting the health of residents remains a priority for governments and the Agency, and we feel that delaying the development of green space next to the construction site until work is completed is best for all parties involved.

- 19) Why is the work not being conducted within an enclosure that would contain the fugitive air emissions?

A: The Pilot-scale work in both the north and south ponds completed in 2008 demonstrated that the work can be completed safely and effectively without an enclosure. Also, the panel did not conclude that an enclosure for the tar ponds portion of the cleanup was required. The only enclosure recommended by the panel was for the tar cell if sediments underwent solidification/stabilization in-situ (in the ground). Ultimately, the sediments were excavated and underwent solidification/stabilization on the former Sysco property.

Models:

- 20) Are you going to re-do your air model (2005) due to the fact that the mountain has changed and the park was overlooked?

A: The project is proceeding with the air modeling program that formed the application for our environmental approvals. All approvals are based on the protection of residents, workers on our site, and the overall environment. We do monitor ambient air conditions in the air above our site. From this data, we see no negative impact in ambient air quality, wind speed, or direction in relation to the coal piles or changes in local topography.

- 21) When the modeling for the air emissions was done, what was the policy for the use of the land at the entrance of Sydney harbour which, presently, contains a huge, new mountain of foreign coal, which has significantly changed the air currents in the Tar Ponds area?

A: The Agency cannot speak to the “policy” other than to say that the land was zoned industrial use, which was the identified use in the air modeling exercise.

- 22) What effect has the removal of a mountain of slag, at the entrance of the Tar Ponds, which has formed a huge gap, which allows the ocean air to funnel into the Tar Ponds which did not exist during the time the modeling took place?

A: Actually, there has not been a significant topographical change as described in this question; a gap existed in 2005.

- 23) When did the monitoring start, in order to establish the models?

A: In 2001, governments developed an ambient air monitoring program to collect baseline data of air quality in areas adjacent to the site. The program was upgraded in 2004 (six urban stations).

- 24) If it was documented in the EIS that a man was working on cars by the side of the road, why weren't the occupants of the park documented? People were there every day!

A: All potential receptors in the community were identified and included in the creation of the air monitoring program. However, we understand that cleanup efforts began on the proposed park area in May, 2008. The community had previously described the land as “regrettably being used as a garbage dump for many years.” In the air monitoring program, it was identified as being unused land.

- 25) When you see the clouds of dust blowing, do you ever take a sample downwind in the dust?

A: The project's extensive air monitoring program, which was designed to protect human health throughout construction activities, includes air sampling both upwind and downwind of the sites. Both samples provide the Agency with the ability to determine which direction the dust is coming from. As many in the urban community can appreciate, dust isn't only generated on the tar ponds site. The results provide the Agency with the information it needs to inform the public when dust in the air - whether it's our activities, the activities of others, or a combination of both (ie: a neighbourhood fire or dry summer day) - reaches a level that requires our work to cease for the day.

- 26) Where are the results of air emissions from the cleanup activities that were calculated and compared to locations of the nearby receptors in the community, as we would like a copy of this report which includes air emission modeling for the Tar Ponds work?

A: The Environmental Impact Statement, which was presented at the joint government review panel hearings, contains this information. It's available on the Agency website and in locations throughout the community.

Monitoring:

- 27) How do the air monitors work and how do they protect the people?

A: Monitoring air quality is an important part of the Sydney Tar Ponds Agency's work at the Tar Ponds and Coke Ovens site. The air monitoring program helps ensure work at the site complies with Provincial and Federal regulations. It also tracks air quality trends, evaluates the progress of the cleanup project and supports the creation of emission control programs.

Air monitoring involves collecting various air contaminants in the outdoor air. The ambient air-monitoring program (AAMP) was initiated in the fall of 2001, with upgrades to the program in 2004, to gather background information prior to intrusive work being performed on the sites. The program consisted of the monitoring of total suspended particulate (TSP), 30 metal parameters, PM less than 2.5 microns (PM_{2.5}), PM less than 10 microns (PM₁₀), a suite of 15 PAHs, 9 individual PCB compounds and a group of 15 selected VOCs. The selection of compounds for the monitoring program was determined based on a review of chemicals that were identified during investigation for the two sites. Most of the compounds identified are not restricted to the Tar Ponds and Coke Ovens Sites, but are also typically released from other sources in the air shed, including home heating, vehicles, industrial facilities and power plants.

Siting of the six air monitoring stations was based on windrose and air dispersion results, public and regulatory authority input, and technical feasibility. Current siting of the air monitoring stations provides sufficient data both upwind and downwind of the Site to provide representative environmental effects.

Where jurisdictional criteria did not exist for the contaminants monitored in the air shed surrounding the Tar Ponds and Cokes Oven sites, site specific criteria were developed for both short-term (24-hour) and long term periods (1-year). The criteria were derived using standard approaches and factors common to many health and environmental regulatory agencies and using scientific principles to protect the health of nearby residents during the cleanup activities of the Site. Based on a review of available criteria and baseline conditions surrounding the site, the health based site specific criteria are generally more protective of health than various jurisdictional criteria.

Sampling frequency at all ambient air monitoring stations is performed every six days in accordance with the National Air Pollution schedule (NAPS) cycle. Sample collection duration is 24 hours, beginning and ending at midnight. Samples are collected, shipped and analyzed in accordance with accepted and adopted QA/QC Plan which follows US EPA protocols. All equipment used to sample each contaminate are approved instruments and are maintained and calibrated as per specifications. All laboratory work is carried out by independent subcontracted analytical facilities that have quality assurance/quality control procedures in place equivalent to accreditation based on the Canadian Standard.

The project's real-time air monitoring program is also among the most sophisticated programs ever implemented on a contaminated site. Approved action levels for Real-time air quality criteria support instantaneous measurements and reporting procedures during construction activities. A PM10 Site Action Level of 155 micrograms per metre cubed is used for Real-time monitoring and a Total Volatile Organic Compounds action level of 0.66 parts per million is used for Real-time monitoring at the perimeter fence line.

Real-time ambient air monitoring for PM10 is performed by using a handheld electronic TSI DustTrak aerosol monitor. Real-time monitoring for Total Volatile Organic Compounds is performed by using a handheld MiniRae 2000 Photo-ionization Detector (PID) and the human nose as a common trigger mechanism. If an odor is detected by an on-site technologist, bystander, or contractor, the PID is able to detect air concentrations almost immediately.

The dust budget calculation is a predictive tool used to determine how much dust would be released into the air shed if construction activities were to continue for the remaining portion of the work day. The budget is calculated by using the real-time data logged throughout the day, plus the highest reading for one hour and adding background contributions (like exhaust from automobiles). If the values calculated do not exceed 990 micrometres per cubic metre, construction activities continue.

- 28) Time is an issue. Monitors should be on all the time. Information should be reported sooner. How can this be accomplished?

A: We agree that time is of the essence when it comes to protecting human health. The Agency does have monitors sampling air during all construction activities. Real-time air monitoring results are uploaded to the project website within a 24 hour-period. If a contractor is coming close to an established action level, the contractor is informed and a series of steps must be taken to mitigate construction activities. If the event can't be mitigated, work stops and the public is quickly notified that work has shut down for the day. Work is stopped well before there is any risk to human health. The subsequent real-time air monitoring report summarizes the activities and is promptly uploaded to the project website for public review. As well, the website allows the public to be notified by email when a new air monitoring report is uploaded to the website.

- 29) Will there be a monitor close to our homes so that we can have access to it?

A: The Sydney Tar Ponds Agency will be installing a VOC (volatile organic compound) canister at the ambient air monitoring station located on Intercolonial Street. The ambient air program follows the six-day NAPS (national air pollution surveillance) Network, Environment Canada. This is in addition to the handheld air monitors used by qualified workers on the site tasked with protecting the health of workers, as well as hand held real-time air monitors used by qualified AllTech technicians at the project fence line.

- 30) Could you install a new monitor that will operate more efficiently and run on a continuous basis?

A: The project's current air monitoring program, which was peer reviewed and approved by some of the top air experts in the field of environmental remediation, is implemented using the most state-of-the-art air monitoring equipment available on the market today. In addition, the project's air experts continuously inspect and assess equipment used to ensure that the tools are working as expected. When deficiencies are identified, they are addressed immediately.

31) When the cleanup is completed, how long do they plan to monitor the site for air emissions?

A: The long-term monitoring plan for the project currently commits governments to monitor the site for 25-years.

32) What is the percentage of the days that both types of monitors are activated?

A: Real-time air monitoring is conducted whenever construction is happening on our site. Results are uploaded to the project website within a 24 hour-period. The subsequent real-time air monitoring report summarizes the activities and is promptly uploaded to the project website for public review. As well, the website allows the public to be notified by email when a new air monitoring report is uploaded to the website. Ambient Air is collected for a 24-hour period and follows the NAPS (National Air Pollution Surveillance) Network, which runs once every six days.

33) Is there a possibility of putting the raw data from the stationary monitors on the STPA web Site so that anyone can check on it, anytime?

A: Monthly ambient air monitoring reports are uploaded to the Agency website on a regular basis.

34) How long does it take to get the results back from the 15 minute readings?

A: These results are immediate because they are taken in real time. Air monitoring technicians use this data to inform project managers about the efficiencies of their environmental control measures. For this reason, the Project proceeds on high quality information that is available immediately to contractors. The continuous 15-minute readings provide an impressive amount of data for contractors tasked with adhering to a stringent air monitoring program. These efforts minimize risks to workers, residents and the environment.

35) Do the six-day sample machines take total accumulation samples for each day or is there a shorter time period breakdown of samples?

A: The samples are collected for the entire 24-hour period of the day.

36) If they are monitoring on an accumulation over one day, instead of the 15 minute monitor test, then the day results, as an average, will show much lower than the 15 minute day test. True?

A: This could be true, depending on which day the results were compared. This is the reason why a real-time air monitoring program was established for the project and is implemented during all construction activities.

37) Why is the monitor that detects PCBs, and other heavy toxins, far away on Alexandra Street and not near the residents of the Tar Ponds area?

A: There are multiple monitors collecting PCB samples. The data proves that PCBs are not an air contaminant of concern at our site.

Closure of Park:

38) Why is only the park closed and not the schools, playgrounds, or businesses?

A: All other receptors were identified and are part of the project's air modeling program. This means that the proximity and use of each existing receptor was included in the creation of the air monitoring program implemented for all work activities. These receptors led air experts to determine the conservative approach needed to protect the public and the environment while the work is carried out. This approach includes action levels contractors must adhere to when working on our site. These action levels, such as the amount of dust in the air on any given construction day, require the contractor to take specific steps to mitigate the event well before it becomes unsafe for the public.

39) When the STPA demanded the park be closed, due to toxic air emissions from their work, they, at the same time, again, offered Wintering Harbour Neighbourhood Association the use of a federal landscape artist, along with reasonable funding to construct it. As the STPA spent over one million dollars to landscape the small memorial park, which is only about 20% of the size of the CBRM park, is it not reasonable that Wintering Harbour Neighbourhood Association receive substantially more, due to the fact that the general public will not be able to enjoy the park for a number of years and, possibly, have to spend a large sum of money for maintenance and, possibly, remediation after the work is completed by the STPA? This is strongly suggested by all the stakeholders of the park.

A: Respectfully, these details are incorrect. The Agency did not provide any funds to a "memorial park." However, the offer to provide a landscape architect and reasonable funding to the organization remains.

40) Why were the members of Wintering Harbour Neighbourhood Association, other stakeholders, and the general public not notified immediately of STPA's intentions to close the park indefinitely? Are you aware that this disrespectful attitude has cost the Wintering Harbour Neighbourhood Association and, indirectly, CBRM and the citizens, considerable hardship and loss of large amounts of slated volunteer hours and considerable amounts of funding?

A: The Agency asked that the park development be delayed pending the completion of the cleanup. We do not believe that opening a park immediately adjacent to the construction activities is in the best interest of all parties.

41) Why did you recently place expensive benches in the Memorial Park, next to the South Tar Ponds, when people are not permitted to walk in the other park next to the Tar Ponds?

A: The Sydney Tar Ponds Agency has not placed benches in the Memorial Park. For clarification purposes, the Sydney Tar Ponds Agency does not own Harbourside Commercial Park, we are a tenant.

Other Information:

42) The STPA referred to other sites in North America that were remediated. Will you tell us the names of areas and companies with their clean ups, so that we can acquire information from them?

A: There are many examples of solidification/stabilization including Super Fund sites in the United States.

Below are some Canadian examples:

- Dockside Green Development, Victoria, BC
- Former Rifle Range, Burnaby, BC
- Former Steel Mill Site, Vancouver, BC
- Glacier National Park, BC
- Southeast False Creek, Vancouver, BC
- Mine Infilling, Canmore, AB
- Swan Hills Treatment Centre, Swan Hills, AB
- Former Battery Breaking Site, Brandon, Manitoba

43) Mistrust has developed through the years by many broken promises, failed attempts, and lack of respect toward some residents. Will this continue?

A: All activities performed at the site are carried out in a manner that is protective of human health and the environment, and are consistent with the recommendations made by the Joint Review Panel.

44) The use of the land, between the creek and Intercolonial Street, did not change for many their pets years, during which time people have been walking through it, with, for the view and exercise. The only difference is that it is looking better. What was the real reason that the 5.5 acres, which is now a park, was not included in the EIS, when there was no decision made, by the CBRM and the citizens, for the use of this property, at that time?

A: The property was identified as unused and was previously described by the community as being used as a “garbage dump.”

45) At the same time the STPA was approaching the CBRM to close the park for an indefinite period of time, during which the STPA would be conducting its work on the Tar Ponds, it was also approaching Wintering Harbour Neighbourhood Association requesting that it grant permission to the STPA to place a viewing stand and parking lot on the park site so it could use it as a facility to accommodate bus tours and other parties to view the work being done on the contaminated site. At this time, the STPA offered the Wintering Harbour Neighbourhood Association the use of a federal landscape artist and monies in exchange for use of the park. In light of this conflict, how can you (STPA) justify closing the park to the public?

A: The Agency has asked that the CBRM delay construction of a park because a park, which has more stringent air monitoring criteria, was not considered for the site when the air modeling program was created. A park can be used by the public from dawn until dusk, which is significantly more time than the public would use a viewing stand.

46) Why was the application from the residents, whose properties are adjacent to the Tar Ponds, not given priority for joining the CLC by the STPA?

A: The government partners take the role of the CLC seriously and reserve seats for bona fide organizations only. At the time of the application (March, 2008), Wintering Harbour wasn't listed as a society under the Registry of Joint Stocks. The association is now listed and has been since June 2008. It can reapply to become a CLC member.

47) There are two types of slag used to make the new road along the Tar Ponds: one is grey and the other is white. Was the slag tested, at any time, for toxic chemicals?

A: Slag used on the construction access roads is blast furnace slag, which meets all environmental regulations for the project.

48) If the slag was tested, where are the results posted on the STPA website?

A: The Slag is tested by the supplier.

49) What were the total costs of the materials used to make the new roads around the Tar Ponds?

A: The total cost of the material was \$1.4 million.