

Qualitative Exposure Assessment – Multiple Agent Form

APPLICABILITY: It should be noted that the purpose of this document is to define priorities and resources for quantitative exposure monitoring or other evaluation and control tools to reduce the risk associated with this project. **THIS DOCUMENT DOES NOT DEFINE REQUIRED CONTROLS** for the project RSS. The text of the RSS defines the engineering and administrative controls necessary to mitigate the hazards associated with these activities.

Project Information	
<input type="checkbox"/> No QEA is required based upon a review of the type(s) of hazard(s) associated with the activity/task	
<input type="checkbox"/> QEA could not be conducted at the time the RSS/Work Plan was reviewed/approved due to inadequate information provided by the PI, Work Planner/Package author on some or all agent(s)/hazard(s). List the agent(s) for which a QEA could not be conducted: <input type="checkbox"/> All Agents (see below) <u>or</u> <input type="checkbox"/> Specific Agent(s) that could not be assessed:	
Process/Job/Task: <small>(SEG/SET Name)</small>	RSS 7728 tasks
Work Description: The Response SFA provides targeted experiments to assess vulnerability of terrestrial ecological systems to projected changes in climatic and atmospheric composition. The science will be conducted in the black spruce forest in northern Minnesota (southern extent of spatially expansive boreal peatland forest – Marcell Experimental Station)	
Facility #: Field Work	Room/Lab/Shop #: See RSS
Organization: BESD	RSS/Work Plan #: 7728

Agents and Control Information

Process/Job/Task	Agent	Quantity or Magnitude	¹ Entry Route	Physical State	Freq	Duration	² PPE	³ Engr / Admin Controls	HSR 1-4	ER 1-4	CR 1 - 3	⁴ QEAR 1-24	⁵ Exposure Decision
1	Field work (bog boardwalks i.e., slippery walking surfaces) Ergonomics (posture, force, duration, repetition)	Load/Lifting in excess of 44 lbs.; Significant bending, reaching, etc.	NA	NA	Weekly	<6 hr.	NA	Utilize neutral postures as much as possible (minimize awkward postures); Use controlled waste level lifting at waist level and never in excess of 20 kgs. Avoiding twisting. Use mechanical lifting when team lifts cannot adequately reduce the risk.	4	1	1	5	ACC
2	Field work (pneumatic post drivers and air compressors) Noise	>85 dBA TWA ₈	NA	NA	Weekly	<6 hr.	HPDs	T (Use HPD's where noise level exceed an action level of 85 dBA.)	4	1	1	5	ACC
3	Field work (bog boardwalks (slippery walking surfaces) Heat Stress	Variable	NA	NA	Weekly	<6 hr.	NA	Heat stress risk is variable dependent upon field activities and environmental conditions and should be assessed on a case-by-case basis	3	2	1	5	ACC
4	Lab activities Chemicals	Various	Inh, S, A	Gas, Liquid, Solid	Weekly	<6 hr.	EP, G	Chemicals hazards and controls are defined by project specific RSS (e.g., 824, 8488, etc.)	2	1	1	3	ACC

1. **Routes of entry codes:** Inh – Inhalation, P – Penetration, Ing – Ingestion, S – Splash; A – Absorption; 2. **PPE Codes:** COV – Coverall (e.g. Tyvek, Saranex, etc.), CV- Cooling vest, EP – Eye protection, FR – Flame Resistant Clothing, FS – Face Shield; G – Gloves, HPD – Hearing Protection Device, LC – Lab Coat, WH – Welding Helmet, APR – Air Purifying Respiratory, PAPR – Powered Air Purifying Respiratory, SAR – Supplied Air Respirator or SCBA; 3. **Engineering Control codes:** GB – Glovebox, GV – General Ventilation, Hood – Other LEV Hood, I/E – Isolate or Enclose Hazard, LH - Lab Hood S – Shielding, W – Wet Methods; **Administrative Control Codes:** T – Training, L/P – Labeling or Postings, P – Written procedure/plan; LT – Limited Stay Time; W/R – Modified Work/Rest Cycle, BEI – Biological Monitoring, MS – Medical Surveillance; 4. **QEA Rating** = (Health Severity Rating[HSR] + Exposure Rating [ER]) X Certainty Rating [CR]; 5. **Exposure Decision:** Acceptable (2-7), Uncertain (8-15), Unacceptable (16-24)

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Exposure Decision and Follow-up						
Acceptable Exposure (LOW RISK)			Uncertain and Unacceptable Exposures			
Was Agent Hazard Acceptable (Low Risk)?	If yes, describe justification for classification as acceptable		Follow-up Priority	Follow-up Schedule	Is Quantitative Monitoring Required?	Recommendations/Comments
1	ACC	QEA rating provides acceptable exposure decision	Low	Annual	No	Quantitative monitoring is not likely to be considered after simulated information collection. Review the exposure assessment and new or changing tasks during the annual RSS review
2	ACC	QEA rating provides acceptable exposure decision	Low	Annual	No	Quantitative monitoring is not likely to be considered after simulated information collection. Review the exposure assessment and new or changing tasks during the annual RSS review
3	ACC	QEA rating provides acceptable exposure decision	Low	Annual	No	Quantitative monitoring is not likely to be considered after simulated information collection. Review the exposure assessment and new or changing tasks during the annual RSS review
4	ACC	QEA rating provides acceptable exposure decision	Low	Annual	No	Quantitative monitoring may be considered after planned direct read sampling information is collected. Review the exposure assessment and new or changing tasks during the annual RSS review

Qualified H&S Professional: John P. Dugger, CSP

Date: June 28, 2012