



**Environmental Review Form for Argonne
National Laboratory**

Form: ANL-985
Version: 4
Your Form ID: ANL-985-755
Form Status: Approved
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Created By: Woodford, John B.

Creator

Badge:	51790	Name:	Woodford, John B.
Cost Center:	115	Division:	NE
Job Title:	Manager, ESH/QA Operations	Employee Type:	Regular Full-Time Exempt
Building:	208	Lab Extension:	2-0910

General Information

Project/Activity Development of the CSX Centrifugal Contactor System for Large-scale Solvent Extraction
 Title: Applications in the Mining & Metals Industry

ASO NEPA Tracking No.:	Type of Funding:
B & R Code:	Identifying Number: 1
SPP Proposal Number: 2016-16119	CRADA Proposal Number:
Work Project Number:	ANL Accounting Number: (Item 3a in Field Work Proposal)

Other (explain):
 List appropriate NEPA Owners:
 Division: NE NEPA Owner:

Cost Code

Task: Center: Project: Activity:

Description of Proposed Action

This is research on applications of centrifugal contactor techniques to solvent extraction of copper. The first phase of the project will involve selection of appropriate liquid phases for extraction, followed by tests at engineering scale using a custom CINC V05 contactor. Copper content will be measured by x-ray fluorescence or optical emission techniques, and UV/vis spectroscopy may be used to supplement these.

Description of Affected Environment

The work takes place in Bldg. 205, Rm. X-158. This is a laboratory space with adequate ventilation, and the work will be performed in a vac-frame hood.

Potential Environmental Effects

- Attach explanation for each "yes" response near bottom of form.
- **See Instructions for Completing Environmental Review Form.**

Section A (Complete For All Projects)		Yes	No	Explanation
1.	Project evaluated for Pollution Prevention and Waste Minimization opportunities and details provided under items 2, 4, 6, 7, 8, 16, and 20 below, as applicable	<input checked="" type="radio"/>	<input type="radio"/>	See below for details.
2.	Air Pollutant Emissions	<input type="radio"/>	<input checked="" type="radio"/>	
3.	Noise	<input type="radio"/>	<input checked="" type="radio"/>	
				Tens of liters of dilute mineral acid and organic solvent (see

4.	Chemical/Oil Storage/Use	<input checked="" type="radio"/>	<input type="radio"/>	below) are used in the largest contactor.
5.	Pesticide Use	<input type="radio"/>	<input checked="" type="radio"/>	
6.	Toxic Substances Control Act (TSCA) Substances			
6a.	Polychlorinated Biphenyls (PCBs)	<input type="radio"/>	<input checked="" type="radio"/>	
6b.	Asbestos or Asbestos Containing Materials	<input type="radio"/>	<input checked="" type="radio"/>	
6c.	Other TSCA Regulated Substances	<input checked="" type="radio"/>	<input type="radio"/>	Nitric acid and kerosene are both regulated under TSCA.
6d.	Import or Export of Chemical Substances	<input type="radio"/>	<input checked="" type="radio"/>	
7.	Biohazards	<input type="radio"/>	<input checked="" type="radio"/>	
8.	Effluent/Wastewater (If yes, see question #12 and contact Peter Lynch (FMS-SEP) at 2-4582 or lynch@anl.gov)	<input type="radio"/>	<input checked="" type="radio"/>	
9.	Waste Management			
9a.	Construction or Demolition Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9b.	Hazardous Waste	<input checked="" type="radio"/>	<input type="radio"/>	At the end of the process, dilute mineral acids and organic solvent will be disposed of in accordance with Argonne requirements.
9c.	Radioactive Mixed Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9d.	Radioactive Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9e.	Asbestos Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9f.	Biological Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9g.	No Path to Disposal Waste	<input type="radio"/>	<input checked="" type="radio"/>	
9h.	Nano-material Waste	<input type="radio"/>	<input checked="" type="radio"/>	
10.	Radiation	<input type="radio"/>	<input checked="" type="radio"/>	
11.	Threatened Violation of ES&H Regulations or Permit Requirement	<input type="radio"/>	<input checked="" type="radio"/>	
12.	New or Modified Federal or State Permits	<input type="radio"/>	<input checked="" type="radio"/>	
13.	Siting, Construction, or Major Modification of Facility to Recover, Treat, Store, or Dispose of Waste	<input type="radio"/>	<input checked="" type="radio"/>	
14.	Public Controversy	<input type="radio"/>	<input checked="" type="radio"/>	
15.	Historic Structures and Objects	<input type="radio"/>	<input checked="" type="radio"/>	
16.	Disturbance of Pre-existing Contamination	<input type="radio"/>	<input checked="" type="radio"/>	
17.	Energy Efficiency, Resource Conserving, and Sustainable Design Features	<input checked="" type="radio"/>	<input type="radio"/>	The majority of scoping studies will be performed using a smaller contactor, to minimize the amount of solvent and copper solutions used before moving on to the large-scale contactor.
Section B (For Projects that Occur Outdoors)		Yes	No	
18.	Threatened or Endangered Species, Critical Habitats, and/or other Protected Species	<input type="radio"/>	<input checked="" type="radio"/>	
19.	Wetlands	<input type="radio"/>	<input checked="" type="radio"/>	
20.	Floodplain	<input type="radio"/>	<input checked="" type="radio"/>	
21.	Landscaping	<input type="radio"/>	<input checked="" type="radio"/>	
22.	Navigable Air Space	<input type="radio"/>	<input checked="" type="radio"/>	
23.	Clearing or Excavation	<input type="radio"/>	<input checked="" type="radio"/>	
24.	Archaeological Resources	<input type="radio"/>	<input checked="" type="radio"/>	
25.	Underground Injection	<input type="radio"/>	<input checked="" type="radio"/>	
26.	Underground Storage Tanks	<input type="radio"/>	<input checked="" type="radio"/>	
27.	Public Utilities or Services	<input type="radio"/>	<input checked="" type="radio"/>	
28.	Depletion of a Non-Renewable Resource	<input type="radio"/>	<input checked="" type="radio"/>	
Section C (For Projects Outside of ANL)		Yes	No	
29.	Prime, Unique, or Locally Important Farmland	<input type="radio"/>	<input checked="" type="radio"/>	

30.	Special Sources of Groundwater (such as sole source aquifer)	<input type="radio"/>	<input checked="" type="radio"/>	
31.	Coastal Zones	<input type="radio"/>	<input checked="" type="radio"/>	
32.	Areas with Special National Designations (such as National Forests, Parks, or Trails)	<input type="radio"/>	<input checked="" type="radio"/>	
33.	Action of a State Agency in a State with NEPA-type Law	<input type="radio"/>	<input checked="" type="radio"/>	
34.	Class I Air Quality Control Region	<input type="radio"/>	<input checked="" type="radio"/>	

Categorical Exclusion

Other (Use field below to enter other categorical exclusion)

This falls under 10 CFR 1021, Subpart D, Categorical Exclusion B3.6 Small-scale research and development, laboratory operations, and pilot projects. The volume of chemicals involved exceed the limit for ASO-CX-265.

ANL NEPA Reviewer Use Only

- My approval is the final approval necessary
- This form requires additional approval from DOE

To be Completed by DOE/ASO

Section D	Yes	No
Are there any extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal?	<input type="radio"/>	<input checked="" type="radio"/>
Is the project connected to other actions with potentially significant impacts or related to other proposed action with cumulatively significant impacts?	<input type="radio"/>	<input checked="" type="radio"/>
If yes, is a categorical exclusion determination precluded by 40 CFR 1506.1 or 10 CFR 1021.211?	<input type="radio"/>	<input type="radio"/>
Can the project or activity be categorically excluded from preparation of an Environment Assessment or Environmental Impact Statement under Subpart D of the DOE NEPA Regulations?	<input checked="" type="radio"/>	<input type="radio"/>
If yes, indicate the class or classes of action from Appendix A or B of Subpart D under which the project may be excluded: 10 CFR 1021-NEPA Implementing Procedures, Subpart D, Appendix B, Categorical Exclusion B 3.6 Small-scale research and development, laboratory operations, and pilot projects.		
If no, indicate the NEPA recommendation and class(es) of action from Appendix C or D to Subpart D to Part 1021 of 10 CFR.		

Attachments

File Description: SOW for work [View Attachment](#)

File Description:

File Description:

Comments

This falls under 10 CFR 1021, Subpart D, Categorical Exclusion B3.6 Small-scale research and development, laboratory operations, and pilot projects. The volume of chemicals involved exceed the limit for ASO-CX-265.

Add Approver

Approver Name	Approver Badge	Reason	Delete

Notifications

The approval notification email will be copied to the people listed below.

Badge	Name	Division	Delete

ASO-CX Number**ASO-CX- 330**

Comments:

This CX approval of "Development of the CSX Centrifugal Contactor System for Large-Scale Solvent Extraction Applications in the Mining and Metals Industry is tracked as ASO-CX-330.

Approval

<u>Approver</u>	<u>Action</u>	<u>Date Routed</u>	<u>Action Date</u>	<u>Approval Reason / Comments</u>	<u>Approval Type</u>
Woodford, John B.	APPROVED	2016-08-15	2016-08-15 16:59:06.0	Creator :	PRIMARY
Woodford, John B.	APPROVED	2016-08-15	2016-08-15 16:59:06.0	Project Manager :	PRIMARY
Brocker, William A.	APPROVED	2016-08-15	2016-08-15 17:22:49.0	NEPA Owner Approval for Argonne Environmental Review :	PRIMARY
Kosky, Karen M.	APPROVED	2016-08-15	2016-08-15 17:30:24.0	ANL NEPA Reviewer :	PRIMARY
Hellman, Karen B.	APPROVED	2016-08-15	2016-08-17 17:18:23.0	ANL-985 Review and Approval :	PRIMARY
Stine, Gail Y.	APPROVED	2016-08-17	2016-08-23 08:44:22.0	ANL-985 Review and Approval :	PRIMARY
Kearns, Paul K.	APPROVED	2016-08-23	2016-08-23 16:33:33.0	ANL-985 ANL COO Review and Approval :	PRIMARY
Joshi, Kaushik N.	APPROVED	2016-08-23	2016-08-24 11:36:00.0	ANL-985 DOE-ASO Review and Approval : This is ASO-CX-330 CX approval.	PRIMARY
Siebach, Peter R.	APPROVED	2016-08-24	2016-08-25 10:33:15.0	ANL-985 DOE NEPA Compliance Officer Review and Approval :	PRIMARY
