1053-13-299 **Dawn B McNair*** (dmcnair@jcsu.edu), 100 Beatties Ford Road, Charlotte, NC 28216. *Duals of Ideals in Rings with Zero Divisors.*

For a nonzero ideal I of R, we define $I^{-1} = (R : I) = \{x \in Q(R) | xI \subseteq R\}$ and call it the dual of I where $Q(R)$ is the complete ring of quotients of R. Much work has been with regard to determining when $(R : I)$ is a ring in the case R is a integral domain. This talk will extend those results to dense ideals in rings with zero divisors. We will prove several properties with duals of prime ideals including for a dense prime P of ring R, $(R : P) \neq (P : P)$ if and only if PR_P is invertible and P is of the form $P = (R : (1, x))$ for some $x \in Q(R)$. Attention will also be given to duals of ideals in Prüfer and Strong Prüfer rings. Such as if P is a semiregular prime ideal of Strong Prüfer ring R and P is noninvertible then $P^{-1} = (P : P)$ is a ring. (Received September 07, 2009)